10/010,720

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     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 10:05:11 ON 28 SEP 2004
L1       1239787 S KINASE?
L2        455391 S HUMAN AND L1
L3       6718512 S CLON? OR EXPRESS? OR RECOMBINANT
L4        224730 S L2 AND L3
L5        606832 S "FETAL BRAIN" OR CEREBELUM OR "BONE MARROW"
L6       1358853 S THYMUS OR PANCREAS OR SPLEEN OR TESTIS
L7          6015 S L4 AND L5
L8          8577 S L4 AND L6
L9         13888 S L7 OR L8
L10         3209 S "NHP"
L11           13 S L9 AND L10
L12           11 DUP REM L11 (2 DUPLICATES REMOVED)
                 E WALKE D W/AU
L13          115 S E3-E6
                 E HILBUN E/AU
L14           24 S E3
                 E DONOHO G/AU
L15          149 S E3-E9
                 E TURNER A/AU
L16         1250 S E3
L17         1508 S L13 OR L14 OR L15 OR L16
L18            6 S L9 AND L17
L19            6 DUP REM L18 (0 DUPLICATES REMOVED)
L20        13888 S L9 AND L4
L21           11 S L12 AND L10
L22           34 S L17 AND L4
L23           20 DUP REM L22 (14 DUPLICATES REMOVED)
                 E BELTRANDELRIO H/AU
L24           84 S E3-E4
                 E VANSLIGTENHORST I/AU
                 E VAN SLIGTENHORST I/AU
L25           64 S E3-E4
L26          133 S L24 OR L25
L27           57 S L4 AND L26
L28            0 S L10 AND L27

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PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


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                   resulting in a closer connection to BABS
 NEWS  4  Jul 30   BEILSTEIN on STN workshop to be held August 24 in conjunction
                   with the 228th ACS National Meeting
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                   fields
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                   Patent Office Classifications
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 NEWS  8  AUG 04   Pricing for the Save Answers for SciFinder Wizard within
                   STN Express with Discover! will change September 1, 2004
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 NEWS 10  AUG 27   BIOTECHABS/BIOTECHDS: Two new display fields added for legal
                   status data from INPADOC
 NEWS 11  SEP 01   INPADOC: New family current-awareness alert (SDI) available
 NEWS 12  SEP 01   New pricing for the Save Answers for SciFinder Wizard within
                   STN Express with Discover!
 NEWS 13  SEP 01   New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
 NEWS 14  SEP 14   STN Patent Forum to be held October 13, 2004, in Iselin, NJ
 NEWS 15  SEP 27   STANDARDS will no longer be available on STN
 NEWS 16  SEP 27   SWETSCAN will no longer be available on STN

 NEWS EXPRESS  JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
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FILE 'HOME' ENTERED AT 10:04:50 ON 28 SEP 2004

=> file medline embase biosis biotechds scisearch hcaplus ntis lifesci
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COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

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FILE 'LIFESCI' ENTERED AT 10:05:11 ON 28 SEP 2004
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=> s kinase?
L1     1239787 KINASE?

=> s human and l1
   4 FILES SEARCHED...
L2      455391 HUMAN AND L1

=> s clon? or express? or recombinant
   3 FILES SEARCHED...
L3     6718512 CLON? OR EXPRESS? OR RECOMBINANT

=> s l2 and l3
L4      224730 L2 AND L3

=> s "fetal brain" or cerebelum or "bone marrow" or "pancreas" or "thymus" or
"spleen"
<------User Break------>

SEARCH ENDED BY USER

=> s "fetal brain" or cerebelum or "bone marrow"
L5      606832 "FETAL BRAIN" OR CEREBELUM OR "BONE MARROW"

=> s thymus or pancreas or spleen or testis
L6     1358853 THYMUS OR PANCREAS OR SPLEEN OR TESTIS

=> s l4 and l4
<------User Break------>

SEARCH ENDED BY USER

=> s l4 and l5
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L7        6015 L4 AND L5

=> s l4 and l6
L8        8577 L4 AND L6

=> s l7 or l8
L9       13888 L7 OR L8

=> d his

     (FILE 'HOME' ENTERED AT 10:04:50 ON 28 SEP 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 10:05:11 ON 28 SEP 2004
L1      1239787 S KINASE?
L2       455391 S HUMAN AND L1
L3      6718512 S CLON? OR EXPRESS? OR RECOMBINANT
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L6      1358853 S THYMUS OR PANCREAS OR SPLEEN OR TESTIS
L7         6015 S L4 AND L5
L8         8577 S L4 AND L6
L9        13888 S L7 OR L8

=> s "NHP"
L10       3209 "NHP"

=> s l9 and l10
L11         13 L9 AND L10

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12          11 DUP REM L11 (2 DUPLICATES REMOVED)

=> d 1-11 ibib ab

L12   ANSWER 1 OF 11  BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
      DUPLICATE 1
ACCESSION NUMBER: 2003-00762  BIOTECHDS
TITLE:            Novel polynucleotides encoding human proteins that
                  share sequence similarity with animal kinases,
                  useful for drug screening diagnosis and in gene therapy of
                  biological disorders;
                     vector-mediated gene transfer, expression in
                     host cell and transgenic animal for recombinant
                     protein production, drug screening and gene therapy
AUTHOR:           TURNER C A; MATHUR B
PATENT ASSIGNEE:  LEXICON GENETICS INC
PATENT INFO:      WO 2002031129 18 Apr 2002
APPLICATION INFO: WO 2001-US32010 11 Oct 2001
PRIORITY INFO:    US 2000-239821 12 Oct 2000; US 2000-239821 12 Oct 2000
DOCUMENT TYPE:    Patent
LANGUAGE:         English
OTHER SOURCE:     WPI: 2002-583341 [62]
AB    DERWENT ABSTRACT:
      NOVELTY - An isolated nucleic acid molecule (I) comprising a 2301 (S1) or
      2298 (S2) base pair sequence, encoding novel human proteins (
      NHPs) of 766 (S3) or 765 (S4) residue amino acid sequences, all
      given in the specification, and sharing sequence similarity with animal
      kinases, or a nucleic acid molecule that encodes (S3) and
      hybridizes under stringent conditions to (S1) or its complement, is new.
           WIDER DISCLOSURE - (1) novel human membrane proteins (
      NHPs) encoded by (I), that share sequence similarity with animal
      kinases; (2) host cell expressing systems comprising
```

(I); (3) antibodies to **NHP** and anti-idiotypic antibodies; (4) fusion proteins comprising **NHP**; (5) genetically engineered animals that either lack or over **express** (I); (6) antagonists and agonists of **NHP**; (7) compounds that modulate the **expression** or activity **NHP**; (8) identifying compounds that modulate, **expression** and/or activity of **NHP**; (9) degenerate nucleic acid variants of (I); (10) vectors that contain (I); and (11) nucleotide sequences (e.g. antisense and ribozyme molecules) that inhibit **expression** of (I).

BIOTECHNOLOGY - Preferred Protein: **NHPs** share structural similarity with animal **kinases**, calcium/calmodulin-dependent protein **kinases** and mitogen activated **kinases**. They are **expressed** in **human** cell lines and **human fetal brain**, brain, pituitary, spinal cord, **testis**, adipose and esophagus cells.

ACTIVITY - None given.

MECHANISM OF ACTION - Gene therapy. No biological data is given.

USE - **NHP** oligonucleotides are useful as hybridization probes for screening libraries and assessing gene **expression** patterns. Sequences derived from regions adjacent to the intron/exon boundaries of **NHP** gene can be used to design primers for use in amplification assays to detect mutations within the exons, splice sites, introns that can be used in diagnostics and pharmacogenomics. **NHP** nucleotide sequences are useful for drug screening effective in the treatment of symptomatic or phenotypic manifestations of perturbing the normal function of **NHP** in the body, and nucleotide constructs encoding **NHP** products are used to genetically engineer host cells to **express NHP** products in vivo. These genetically engineered cells function as bioreactors in the body delivering a continuous supply of a **NHP**, a **NHP** peptide, or a **NHP** fusion protein to the body. Nucleotide construct encoding **NHP** products are also useful in gene therapy for modulating **NHP expression** and to produce genetically engineered host cells to **express NHP** products in vivo. The host cells allow not only for the identification of compounds that bind to the endogenous receptor/ligand of a **NHP**, but can also identify compounds that trigger **NHP**-mediated activities or pathways. **NHP** nucleotide sequences may also be used as part of ribozyme and/or triple helix sequences that are useful for **NHP** gene regulation. When the unique **NHP** sequences are knocked-out they provide a method of identifying phenotypic **expression** of the particular gene as well as a method of assigning function to previously unknown genes. The unique **NHP** sequences are useful for the identification of protein coding sequence, mapping a unique gene to a particular chromosome and to identify mutations associated with a particular disease and also as a diagnostic or prognostic assay. These sequences identify biologically verified exon splice junctions as opposed to splice junctions that may been bioinformatically predicted from genomic sequence alone. The sequences are also useful as additional DNA markers for restriction fragment length polymorphism (RFLP) analysis, in forensic biology, and in defining and monitoring both drug action and toxicity. The encoded **NHP** polypeptides are useful for generating antibodies, as reagents in diagnostic assays, for identifying other cellular gene products related to **NHP** and as reagents in assays for screening for compounds that are useful in the treatment of mental, biological or medical disorders and diseases. Addressable arrays comprising **NHP** sequences are useful to identify and characterize the temporal and tissue specific **expression** of a gene. The **NHP** sequences can be used in microarrays or other assay formats, to screen collections of genetic material from patients who have a particular medical condition. (41 pages)

L12 ANSWER 2 OF 11 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN

DUPLICATE 2
ACCESSION NUMBER: 2002-12398 BIOTECHDS
TITLE: Novel polynucleotide encoding novel **human** protein sharing structural similarity with animal **kinases** e.g. serine-threonine, calcium/calmodulin-dependent, and myosin light chain **kinases**, useful as probes and primers;
vector-mediated gene transfer, **expression** in host cell, antibody, antisense oligonucleotide and ribozyme for **recombinant** protein production, drug screening and gene therapy
AUTHOR: FRIDDLE C J; HILBUN E; NEPOMNICHY B; HU Y
PATENT ASSIGNEE: LEXICON GENETICS INC
PATENT INFO: WO 2002018555 7 Mar 2002
APPLICATION INFO: WO 2000-US26776 31 Aug 2000
PRIORITY INFO: US 2000-229280 31 Aug 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-292200 [33]
AB DERWENT ABSTRACT:

NOVELTY - An isolated novel **human** protein (**NHP**) encoding nucleic acid, where the **NHP** shares structural similarity with animal **kinases** e.g. serine-threonine, calcium/calmodulin-dependent, and myosin light chain **kinases**, is new.

DETAILED DESCRIPTION - An isolated novel **human** protein (**NHP**) encoding nucleic acid, where the **NHP** shares structural similarity with animal **kinases** e.g. serine-threonine, calcium/calmodulin-dependent, and myosin light chain **kinases**, is new. The **NHP** nucleic acid comprises a nucleotide sequence encoding a fully defined sequence of 683 (S2), 654 (S4), 388 (S7) and 398 (S9) amino acids as given in the specification, and which hybridizes under stringent conditions to a fully defined sequence of 2052 (S1) or 1167 (S6) nucleotides as given in specification, or its complement. An INDEPENDENT CLAIM is also included for an isolated nucleic acid molecule that comprises at least 24 contiguous bases of (S6).

WIDER DISCLOSURE - The following are disclosed: (1) novel **human** proteins (**NHP**) having a fully defined sequence of (S2), (S4), (S7) or (S9) encoded by **NHP** polynucleotides where the proteins are useful for generating antibodies, reagents in diagnostic assays, identification of other cellular gene products related to **NHP**, as reagents in assays for screening compounds that can be used as pharmaceutical reagents for treating mental, biological or medical disorders and diseases; (2) a nucleic acid selected from: (a) a sequence that encode mammalian homologs of **NHP** including the specifically described **NHPs** and the **NHP** gene products (b) a sequence that encode one or more portions of the **NHPs** that correspond to functional domains, and the polypeptide products specified by such nucleotide sequences (c) a sequence that encode mutant versions, engineered or naturally occurring, of the described **NHPs** in which all or part of at least one domain is deleted or altered, and the polypeptide products specified by such nucleotide sequences (d) a sequence that encode fusion proteins containing a coding region from an **NHP** or one of its domains (e.g. receptor or ligand binding domain) fused to another peptide or polypeptide, or (e) therapeutic or diagnostic derivatives of the polynucleotides; (3) agonist and antagonist of **NHPs**; (4) compounds that modulate the **expression** or activity of **NHPs** and nucleotide sequences (nucleotide constructs) that can be used to inhibit the **expression** of **NHP** (e.g., antisense, ribozyme molecules, etc.,) or to promote the **expression** of **NHP**; (5) transgenic animals that **express NHP** transgene or knock-outs that do not **express** a functional **NHP**; (6)

processes of identifying compounds that modulate i.e., act as agonist or antagonist of **NHP expression** and/or **NHP** activity; (7) antibodies against **NHP** and idiotypic antibodies against anti-**NHP** antibodies; (8) fusion proteins comprising **NHP** protein; (9) degenerate nucleic acid variants of the **NHP** polynucleotide sequences; (10) DNA vectors that contain any of the **NHP** coding sequences and/or their complements; (11) genetically engineered host cells **expressing NHP** coding sequences operatively associated with a regulatory element; (12) analogues, derivatives and **NHP** homologues from other species; (13) proteins that are functionally equivalent to **NHP** encoded by the above described nucleotide sequences; and (14) pharmaceutical formulations comprising the **NHP** polynucleotide sequences.

BIOTECHNOLOGY - Isolation: The **NHP** polynucleotides were complied from sequences available in GENBANK, and cDNAs generated from kidney, **testis**, trachea, esophagus, pituitary, **human** gene trapped products ((S2) and (S4)) or **bone marrow** and skeletal muscle mRNAs.

ACTIVITY - None given. No biological data is given.

MECHANISM OF ACTION - Gene therapy. No biological data is given.

USE - The **NHP** polynucleotide sequences that encode **NHPs** sharing structural similarity with animal **kinases** including NIMA (never in mitosis A) related **kinases**, serine-threonine **kinases**, calcium/calmodulin-dependent **kinases**, and myosin light chain **kinases**, when knocked out provide a method for identifying phenotypic **expression** of the particular gene as well as a method of assigning function to previously unknown genes, for identifying coding sequence and mapping a unique gene to a particular chromosome and in the identification of biologically relevant splice junctions. Complementary sequences of (I) that hybridize to (I) can be used in conjunction with PCR to screen libraries, isolate **clones** and prepare **cloning** and sequencing templates. Such oligonucleotides can also be used as hybridization probes for screening libraries, for assessing gene **expression** patterns. The probes are useful for identification, selection and validation of novel molecular targets for drug discovery. Labeled **NHP** nucleotide probes can be used to screen a **human** genomic library which is helpful for identifying polymorphisms, determining the genomic structure of a given locus/allele and designing diagnostic tests. The probe sequences also have use in defining and monitoring both drug action and toxicity. Oligonucleotides complementary to **NHPs** may encode or act as **NHP** antisense molecules, or may be used as part of ribozyme and/or triple helix sequences. Addressable arrays comprising the **NHP** polynucleotides can be used to identify and characterize the temporal and tissue **expression** of a gene. The use of addressable arrays comprising the **NHP** polynucleotide sequence provide detailed information about transcriptional changes involved in specific pathway, potentially leading to the identification of novel components or gene functions that manifest themselves as novel phenotypes. Microarray formats comprising **NHP** polynucleotide sequences can be used to screen collections of genetic material from patients who have a particular medical condition. The sequences are also useful for identifying mutations associated with a particular disease and also as a prognostic or diagnostic assay. (I) is also useful in the molecular mutagenesis/evolution of proteins that are at least partially encoded by the described novel sequences.

EXAMPLE - None given.(46 pages)

L12 ANSWER 3 OF 11 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2003-01894 BIOTECHDS
TITLE: Novel polynucleotide encoding **human** proteins that are structurally similar to animal **kinases**, useful for drug screening, diagnosis, in gene therapy of disorders

and diseases e.g. cancer and pharmacogenomic applications; **recombinant** enzyme protein production and sense and antisense sequence use in disease therapy and gene therapy

AUTHOR: YU X; MIRANDA M; FRIDDLE C J
PATENT ASSIGNEE: LEXICON GENETICS INC
PATENT INFO: WO 2002059325 1 Aug 2002
APPLICATION INFO: WO 2001-US50497 20 Dec 2001
PRIORITY INFO: US 2000-258335 27 Dec 2000; US 2000-258335 27 Dec 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-599796 [64]

AB DERWENT ABSTRACT:

NOVELTY - An isolated nucleic acid molecule (I) comprising a nucleotide sequence encoding a novel **human** protein (**NHP**) of 2054 (S1) or 1958 (S2) amino acids given in specification, that share structural similarity with animal **kinases**, including serine-threonine **kinases**, particularly Citron rho-interacting **kinases**, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) an isolated nucleic acid molecule (II) comprising a nucleotide sequence that encodes (S1) and hybridizes under stringent conditions to a sequence (S3) of 6165 base pairs given in the specification, or its complement; and (2) an isolated nucleic acid molecule (III) comprising at least 24 contiguous bases of (S3).

WIDER DISCLOSURE - Disclosed are: (1) novel **human** proteins (**NHPs**) encoded by (I), that share structural similarity with animal **kinases**; (2) host cell **expressing** systems comprising (I); (3) antibodies to **NHP** and anti-idiotypic antibodies; (4) fusion proteins comprising **NHP**; (5) genetically engineered animals that either lack or over **express** (I); (6) antagonists and agonists of **NHP**; (7) compounds that modulate the **expression** or activity **NHP** which can be used for diagnosis, drug screening, clinical trial monitoring, treatment of diseases and disorders, and cosmetic or nutriceutical applications; (8) identifying compounds that modulate, **expression** and/or activity of **NHP**; (9) degenerate nucleic acid variants of (I); (9) vectors that contain (I); (10) nucleotide sequences (e.g. antisense and ribozyme molecules) that inhibit **expression** of (I); and (11) proteins that are functionally equivalent to **NHPs**.

BIOTECHNOLOGY - Preferred Protein: **NHPs** are novel proteins **expressed** in **human** cell lines and **human testis**, small intestine, fetal kidney, adenocarcinoma, embryonic carcinoma cells and osteosarcoma cells.

ACTIVITY - Nootropic; Cytostatic.

MECHANISM OF ACTION - Gene therapy. No suitable data given.

USE - **NHP** oligonucleotides are useful as hybridization probes for screening libraries and assessing gene **expression** patterns. **NHP** sequences are useful to identify mutations associated with a particular disease and also as a diagnostic or prognostic assay, and also in the molecular mutagenesis/evolution of proteins that are at least partially encoded by the **NHP** sequences. Sequences derived from regions adjacent to the intron/exon boundaries of **NHP** gene can be used to design primers for use in amplification assays to detect mutations within the exons, splice sites, introns that can be used in diagnostics and pharmacogenomics. **NHP** sequences are utilized in microarrays or other assay formats, to screen collections of genetic material from patients who have a particular medical condition. **NHP** nucleotide sequences are useful for drug screening effective in the treatment of symptomatic or phenotypic manifestations of perturbing the normal function of **NHP** in the body, and nucleotide constructs encoding **NHP** products are used to genetically engineer host cells to **express NHP** products in vivo. These genetically engineered cells function as

bioreactors in the body delivering a continuous supply of a **NHP**, a **NHP** peptide, or a **NHP** fusion protein to the body. Nucleotide construct encoding **NHP** products are also useful in gene therapy for modulating **NHP expression** and to produce genetically engineered host cells to **express** **NHP** products in vivo. **NHP** nucleotide sequences may also be used as part of ribozyme and/or triple helix sequences that are useful for **NHP** gene regulation. The encoded **NHP** polypeptides are useful for generating antibodies, as reagents in diagnostic assays, for identifying other cellular gene products related to **NHP** and as reagents in assays for screening for compounds that are useful in the treatment of mental, biological or medical disorders and diseases including cancer.(50 pages)

L12 ANSWER 4 OF 11 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2003-00776 BIOTECHDS
TITLE: Novel polynucleotides encoding **human** proteins that are structurally related to animal **kinases**, useful for drug screening, diagnosis and in gene therapy of biological disorders;
vector-mediated **recombinant** protein gene transfer and **expression** in host cell for use in drug screening and nootropic disease and mental disorder diagnosis and gene therapy
AUTHOR: TURNER C A; MATHUR B; FRIDDLE C J
PATENT ASSIGNEE: LEXICON GENETICS INC
PATENT INFO: WO 2002048333 20 Jun 2002
APPLICATION INFO: WO 2001-US49068 12 Dec 2001
PRIORITY INFO: US 2001-289422 8 May 2001; US 2000-255103 12 Dec 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-583505 [62]
AB DERWENT ABSTRACT:
NOVELTY - Isolated nucleic acid molecule (I) comprising a nucleotide sequence encoding a novel **human** protein (**NHP**) of 870, 864, 764, 751, 654, 648, 548, 535, 895, 889, 789, 776, 982, 976, 876, 863, 957, 951, 851 or 838 amino acids given in specification, that share structural similarity with animal **kinases**, including serine-threonine **kinases**, casein **kinases**, calcium/calmodulin-dependent protein **kinases** and mitogen activated **kinases**, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an isolated nucleic acid molecule comprising a nucleotide sequence that encodes the sequence of 870 amino acids and hybridizes under stringent conditions to the nucleotide sequence of 2613 base pairs given in the specification or its complement.

WIDER DISCLOSURE - Disclosed are: (1) novel **human** membrane proteins (**NHPs**) encoded by (I), that share structural similarity with mammalian ion channel proteins and particularly voltage-gated potassium channel proteins; (2) host cell **expressing** systems comprising (I); (3) antibodies to **NHP** and anti-idiotypic antibodies; (4) fusion proteins comprising **NHP**; (5) genetically engineered animals that either lack or over **express** (I); (6) antagonists and agonists of **NHP**; (7) compounds that modulate the **expression** or activity **NHP**; (8) identifying compounds that modulate, **expression** and/or activity of **NHP**; (9) degenerate nucleic acid variants of (I); (10) vectors that contain (I); and (11) nucleotide sequences (e.g. antisense and ribozyme molecules) that inhibit **expression** of (I).

BIOTECHNOLOGY - Preferred Protein: **NHPs** are novel proteins **expressed** in **human** cell lines and **human** **fetal brain**, brain, pituitary, cerebellum, and fetal lung, kidney, and embryo cells.

ACTIVITY - Nootropic.
MECHANISM OF ACTION - Gene therapy. No suitable data is given.
USE - **NHP** oligonucleotides are useful as hybridization probes for screening libraries and assessing gene **expression** patterns. **NHP** sequences are useful to identify mutations associated with a particular disease and also as a diagnostic or prognostic assay, and also in the molecular mutagenesis/evolution of proteins that are at least partially encoded by the **NHP** sequences. Sequences derived from regions adjacent to the intron/exon boundaries of **NHP** gene can be used to design primers for use in amplification assays to detect mutations within the exons, splice sites, introns that can be used in diagnostics and pharmacogenomics. **NHP** sequences are utilized in microarrays or other assay formats, to screen collections of genetic material from patients who have a particular medical condition. **NHP** nucleotide sequences are useful for drug screening effective in the treatment of symptomatic or phenotypic manifestations of perturbing the normal function of **NHP** in the body, and nucleotide constructs encoding **NHP** products are used to genetically engineer host cells to **express NHP** products in vivo. These genetically engineered cells function as bioreactors in the body delivering a continuous supply of a **NHP**, a **NHP** peptide, or a **NHP** fusion protein to the body. Nucleotide construct encoding **NHP** products are also useful in gene therapy for modulating **NHP expression** and to produce genetically engineered host cells to **express** **NHP** products in vivo. **NHP** nucleotide sequences may also be used as part of ribozyme and/or triple helix sequences that are useful for **NHP** gene regulation. The encoded **NHP** polypeptides are useful for generating antibodies, as reagents in diagnostic assays, for identifying other cellular gene products related to **NHP** and as reagents in assays for screening for compounds that are useful in the treatment of mental, biological or medical disorders and diseases.
EXAMPLE - No suitable example given. (93 pages)

L12 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:408781 HCAPLUS
DOCUMENT NUMBER: 137:2411
TITLE: Protein and cDNA sequences of **human** **kinase** sequence homologs
INVENTOR(S): Friddle, Carl Johan; Hilbun, Erin; Mathur, Brian; Turner, C. Alexander, Jr.
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002042438	A2	20020530	WO 2001-US43825	20011119
WO 2002042438	A3	20020829		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002028633	A5	20020603	AU 2002-28633	20011119
US 2002110908	A1	20020815	US 2001-992481	20011119

US 6593125	B2	20030715			
US 2003181705	A1	20030925	US 2003-434034		20030508
PRIORITY APPLN. INFO.:			US 2000-252011P	P	20001120
			US 2001-992481	A1	20011119
			WO 2001-US43825	W	20011119

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated **NHPs**, which shares substantial sequence homol. with animal **kinases**, especially NEK family **kinases** and calcium/calmodulin-dependent protein **kinase**. NEK family **kinase** homolog gene, which has been mapped on **human** chromosome 17, is **expressed** in, inter alia, **human** cell lines and pituitary, **thymus**, **spleen**, lymph node, **bone marrow**, trachea, kidney, prostate, **testis**, thyroid, adrenal gland, **pancreas**, salivary gland, stomach, small intestine, skeletal muscle,heart, uterus, placenta, adipose, skin, bladder, rectum, pericardium, ovary, fetal kidney, fetal lung, gallbladder, tongue, aorta, 6-, 9-, and 12-wk embryos, adenocarcinoma, osteosarcoma, and embryonic carcinoma cells. Calcium/calmodulin-dependent protein **kinase** homolog gene, which has been mapped on **human** chromosome 3, is predominantly **expressed** in **fetal brain**, brain, spinal cord, **thymus**, lymph node, trachea, lung, prostate, **testis**, thyroid, adrenal gland, stomach, small intestine, skeletal muscle, uterus, placenta, mammary gland, skin, bladder, pericardium, hypothalamus, fetal kidney, fetal lung, tongue, aorta, 6-, 9-, and 12-wk embryos, and embryonic carcinoma cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate **NHP** activity or levels. Also disclosed are methods for utilizing **NHP** in drug screening assays and in therapy directed against diseases associated with inappropriate **NHP** activity or levels.

L12 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	2001:693529 HCAPLUS
DOCUMENT NUMBER:	135:268247
TITLE:	Protein and cDNA sequences of novel **human** phospholipases homologs and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S):	Hu, Yi; Nepomnichy, Boris; Donoho, Gregory; Hilbun, Erin; Turner, C. Alexander, Jr.; Abuin, Alejandro; Friedrich, Glenn; Zambrowicz, Brian; Sands, Arthur T.
PATENT ASSIGNEE(S):	Lexicon Genetics Incorporated, USA
SOURCE:	PCT Int. Appl., 45 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001068871	A2	20010920	WO 2001-US7994	20010313
WO 2001068871	A3	20020321		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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US 2002081595	A1	20020627	US 2001-804969	20010313
EP 1317551	A2	20030611	EP 2001-920329	20010313
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IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2004500107	T2	20040108	JP 2001-567355		20010313
PRIORITY APPLN. INFO.:			US 2000-188885P	P	20000313
			US 2000-189693P	P	20000315
			WO 2001-US7994	W	20010313

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated **NHPs**, which shares structural similarity with animal phospholipases, including phospholipases C δ-4. The **NHPs** are novel proteins that are **expressed** in, inter alia, **human** cell lines and **human** fetal and adult brain, cerebellum, spinal cord, **thymus**, **spleen**, **testis**, thyroid, adrenal gland, small intestine, colon, adipose, rectum, and placenta cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate **NHP** activity or levels. Also disclosed are methods for utilizing **NHP** in drug screening assays and in therapy directed against diseases associated with inappropriate **NHP** activity or levels.

L12 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	2001:693527 HCAPLUS
DOCUMENT NUMBER:	135:252804
TITLE:	Protein and cDNA sequences of novel **human** G protein-coupled receptor **kinase** homologs and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S):	Walke, D. Wade; Wilganowski, Nathaniel L.; Turner, C. Alexander, Jr.
PATENT ASSIGNEE(S):	Lexicon Genetics Incorporated, USA
SOURCE:	PCT Int. Appl., 34 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001068869	A2	20010920	WO 2001-US7500	20010308
WO 2001068869	A3	20020124		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002042503	A1	20020411	US 2001-802117	20010308
US 6444456	B2	20020903		
EP 1263967	A2	20021211	EP 2001-916502	20010308
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004500106	T2	20040108	JP 2001-567353	20010308
US 2003004328	A1	20030102	US 2002-217745	20020812

PRIORITY APPLN. INFO.:	US 2000-188449P	P	20000310
	US 2001-802117	A1	20010308
	WO 2001-US7500	W	20010308

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated **NHPs**, which shares structural similarity with animal **kinase**, including G protein-coupled receptor **kinases**. The **NHPs** are novel proteins that are **expressed** in, inter alia, **human** cell lines and **human** fetal and adult brain, pituitary, cerebellum, spinal cord,

thymus, kidney, fetal liver, prostate, **testis**, adrenal gland, small intestine, pericardium, mammary gland, placenta, uterus, and skeletal muscle cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate **NHP** activity or levels. Also disclosed are methods for utilizing **NHP** in drug screening assays and in therapy directed against diseases associated with inappropriate **NHP** activity or levels.

L12 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:676960 HCAPLUS
DOCUMENT NUMBER: 135:237660
TITLE: Protein and cDNA sequences of novel **human kinase** interacting protein homologs and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S): Mathur, Brian; Turner, C. Alexander, Jr.
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001066760	A2	20010913	WO 2001-US7499	20010308
WO 2001066760	A3	20020530		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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US 2002082406	A1	20020627	US 2001-802116	20010308
EP 1343901	A2	20030917	EP 2001-918467	20010308
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JP 2004519203	T2	20040702	JP 2001-565914	20010308
PRIORITY APPLN. INFO.:			US 2000-187719P P	20000308
			WO 2001-US7499 W	20010308

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated **NHPs**, which shares structural similarity with mammalian sugar and sodium-dependent inorg. phosphate **kinase** interacting proteins, and NBMPR-sensitive nucleoside **kinase** interacting proteins. The **NHPs** are novel proteins that are **expressed** in, inter alia, **human** cell lines and **human** fetal and adult brain, pituitary, cerebellum, spinal cord, **thymus**, **spleen**, lymph node, **bone marrow**, trachea, fetal and adult kidney, liver, prostate, **testis**, thyroid, adrenal gland, salivary gland, stomach, small intestine, colon, adipose, rectum, pericardium, hypothalamus, cervix, bladder, esophagus, skin, mammary gland, placenta, uterus, skeletal muscle, **pancreas**, fetal lung, and ovary cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate **NHP** activity or levels. Also disclosed are methods for utilizing **NHP** in drug screening assays and in therapy directed against diseases associated with inappropriate **NHP** activity or levels.

L12 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:618177 HCAPLUS

DOCUMENT NUMBER: 135:191337
TITLE: Protein and cDNA sequences of novel **human** **kinase** homologs and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S): Walke, D. Wade; Hu, Yi; Nepomnichy, Boris; Turner, C. Alexander, Jr.; Zambrowicz, Brian
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001061016	A2	20010823	WO 2001-US5356	20010215
WO 2001061016	A3	20020207		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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US 2002038011	A1	20020328	US 2001-783320	20010215
EP 1257652	A2	20021120	EP 2001-912839	20010215
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JP 2003531577	T2	20031028	JP 2001-559853	20010215

PRIORITY APPLN. INFO.:

US 2000-183582P	P	20000218
US 2000-184014P	P	20000222
WO 2001-US5356	W	20010215

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated **NHPs**, which shares structural similarity with animal **kinases**, including cell division control protein **kinases**, serine/threonine protein **kinases** and membrane-associated guanylate **kinases** (MAGUKs). The **NHPs** are novel proteins that are **expressed** in, inter alia, **human** cell lines and **human** fetal and adult brain, pituitary, cerebellum, **thymus**, **spleen**, lymph node, **bone marrow**, trachea, fetal and adult liver, prostate, **testis**, thyroid, adrenal gland, **pancreas**, salivary gland, stomach, small intestine, colon, uterus, placenta, mammary gland, adipose, esophagus, bladder, cervix, rectum, pericardium, hypothalamus, ovary, fetal and adult kidney, and fetal lung cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate **NHP** activity or levels. Also disclosed are methods for utilizing **NHP** in drug screening assays and in therapy directed against diseases associated with inappropriate **NHP** activity or levels.

L12 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:435241 HCAPLUS
DOCUMENT NUMBER: 135:41828
TITLE: Protein and cDNA sequences of a novel **human** protein **kinase** homolog and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S): Donoho, Gregory; Scoville, John; Turner, C. Alexander, Jr.; Friedrich, Glenn; Zambrowicz, Brian; Abuin, Alejandro; Sands, Arthur T.
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA

SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001042435	A2	20010614	WO 2000-US33240	20001207
WO 2001042435	A3	20011108		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1240187	A2	20020918	EP 2000-989231	20001207
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US 2003064495	A1	20030403	US 2000-733388	20001207
US 6602698	B2	20030805		
JP 2004504005	T2	20040212	JP 2001-544312	20001207
US 2004014112	A1	20040122	US 2003-446175	20030527

PRIORITY APPLN. INFO.:			
US 1999-169428P	P	19991207	
US 2000-733388	A1	20001207	
WO 2000-US33240	W	20001207	

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated **NHPs**, which shares structural similarity with animal **kinases**, and particularly calcium/calmodulin-dependant protein **kinases** and serin/threonine protein **kinases**. The **NHP** is a novel protein that is **expressed** in, inter alia, **human** cell lines, **testis**, pituitary, **fetal brain**, **thymus** , **spleen**, cerebellum, trachea, thyroid, adrenal gland, fetal kidney, colon, uterus, **pancreas** and lung cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate **NHP** activity or levels. Also disclosed are methods for utilizing **NHP** in drug screening assays and in therapy directed against diseases associated with inappropriate **NHP** activity or levels.

L12 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:247510 HCAPLUS
DOCUMENT NUMBER: 134:261891
TITLE: Protein and cDNA sequences of **human** serine/threonine protein **kinase** and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S): Donoho, Gregory; Turner, C. Alexander, Jr.; Nehls, Michael; Friedrich, Glenn; Zambrowicz, Brian; Sands, Arthur T.
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

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    WO 2001023579        A1    20010405    WO 2000-US26621        20000927
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    EP 1220927           A1    20020710    EP 2000-966996         20000927
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    JP 2003510082        T2    20030318    JP 2001-526961         20000927
    US 6716616           B1    20040406    US 2000-671050         20000927
PRIORITY APPLN. INFO.:                       US 1999-156511P     P  19990928
                                             WO 2000-US26621     W  20000927
AB  This invention provides protein and cDNA sequences for newly identified
    human proteins, designated NHPs, which shares
    substantial sequence homol. with animal kinases, and more
    particular serine/threonine protein kinases.  While NHP
    shares sequence homol. with other serine/threonine protein kinases
    , its primary sequence is unique.  Its expression is detected in
    various human tissues including brain, pituitary, spinal cord,
    spleen, trachea, kidney, prostate, testis, adrenal gland
    cells, and gene trapped human cells.  In one embodiment, the
    invention relates to diagnostic assays for detecting diseases associated with
    inappropriate NHP activity or levels.  Also disclosed are
    methods for utilizing NHP in drug screening assays and in
    therapy directed against diseases associated with inappropriate NHP
    activity or levels.
REFERENCE COUNT:          3     THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT


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L6       1358853 S THYMUS OR PANCREAS OR SPLEEN OR TESTIS
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L9         13888 S L7 OR L8
L10         3209 S "NHP"
L11           13 S L9 AND L10
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L14           24 S E3
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L16         1250 S E3

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L17         1508 L13 OR L14 OR L15 OR L16

=> s l9 and l17
L18            6 L9 AND L17

=> dup rem l18
PROCESSING COMPLETED FOR L18
L19            6 DUP REM L18 (0 DUPLICATES REMOVED)

=> d 1-6 ibib ab

L19   ANSWER 1 OF 6  BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-12398  BIOTECHDS
TITLE:            Novel polynucleotide encoding novel human protein
                  sharing structural similarity with animal kinases
                  e.g. serine-threonine, calcium/calmodulin-dependent, and
                  myosin light chain kinases, useful as probes and
                  primers;
                     vector-mediated gene transfer, expression in
                     host cell, antibody, antisense oligonucleotide and
                     ribozyme for recombinant protein production,
                     drug screening and gene therapy
AUTHOR:           FRIDDLE C J; HILBUN E; NEPOMNICHY B; HU Y
PATENT ASSIGNEE:  LEXICON GENETICS INC
PATENT INFO:      WO 2002018555 7 Mar 2002
APPLICATION INFO: WO 2000-US26776 31 Aug 2000
PRIORITY INFO:    US 2000-229280 31 Aug 2000
DOCUMENT TYPE:    Patent
LANGUAGE:         English
OTHER SOURCE:     WPI: 2002-292200 [33]
AB    DERWENT ABSTRACT:
      NOVELTY - An isolated novel human protein (NHP) encoding
      nucleic acid, where the NHP shares structural similarity with animal
      kinases e.g. serine-threonine, calcium/calmodulin-dependent, and
      myosin light chain kinases, is new.
           DETAILED DESCRIPTION - An isolated novel human protein
      (NHP) encoding nucleic acid, where the NHP shares structural similarity
      with animal kinases e.g. serine-threonine, calcium/calmodulin-
      dependent, and myosin light chain kinases, is new. The NHP
      nucleic acid comprises a nucleotide sequence encoding a fully defined
      sequence of 683 (S2), 654 (S4), 388 (S7) and 398 (S9) amino acids as
      given in the specification, and which hybridizes under stringent
      conditions to a fully defined sequence of 2052 (S1) or 1167 (S6)
      nucleotides as given in specification, or its complement. An INDEPENDENT
      CLAIM is also included for an isolated nucleic acid molecule that
      comprises at least 24 contiguous bases of (S6).
           WIDER DISCLOSURE - The following are disclosed: (1) novel
      human proteins (NHP) having a fully defined sequence of (S2),
      (S4), (S7) or (S9) encoded by NHP polynucleotides where the proteins are
      useful for generating antibodies, reagents in diagnostic assays,
      identification of other cellular gene products related to NHP, as
      reagents in assays for screening compounds that can be used as
      pharmaceutical reagents for treating mental, biological or medical
      disorders and diseases; (2) a nucleic acid selected from: (a) a sequence
      that encode mammalian homologs of NHP including the specifically
      described NHPs and the NHP gene products (b) a sequence that encode one
      or more portions of the NHPs that correspond to functional domains, and
      the polypeptide products specified by such nucleotide sequences (c) a
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sequence that encode mutant versions, engineered or naturally occurring, of the described NHPs in which all or part of at least one domain is deleted or altered, and the polypeptide products specified by such nucleotide sequences (d) a sequence that encode fusion proteins containing a coding region from an NHP or one of its domains (e.g. receptor or ligand binding domain) fused to another peptide or polypeptide, or (e) therapeutic or diagnostic derivatives of the polynucleotides; (3) agonist and antagonist of NHPs; (4) compounds that modulate the **expression** or activity of NHPs and nucleotide sequences (nucleotide constructs) that can be used to inhibit the **expression** of NHP (e.g., antisense, ribozyme molecules, etc.,) or to promote the **expression** of NHP; (5) transgenic animals that **express** NHP transgene or knock-outs that do not **express** a functional NHP; (6) processes of identifying compounds that modulate i.e., act as agonist or antagonist of NHP **expression** and/or NHP activity; (7) antibodies against NHP and idiotypic antibodies against anti-NHP antibodies; (8) fusion proteins comprising NHP protein; (9) degenerate nucleic acid variants of the NHP polynucleotide sequences; (10) DNA vectors that contain any of the NHP coding sequences and/or their complements; (11) genetically engineered host cells **expressing** NHP coding sequences operatively associated with a regulatory element; (12) analogues, derivatives and NHP homologues from other species; (13) proteins that are functionally equivalent to NHP encoded by the above described nucleotide sequences; and (14) pharmaceutical formulations comprising the NHP polynucleotide sequences.

BIOTECHNOLOGY - Isolation: The NHP polynucleotides were complied from sequences available in GENBANK, and cDNAs generated from kidney, **testis**, trachea, esophagus, pituitary, **human** gene trapped products ((S2) and (S4)) or **bone marrow** and skeletal muscle mRNAs.

ACTIVITY - None given. No biological data is given.

MECHANISM OF ACTION - Gene therapy. No biological data is given.

USE - The NHP polynucleotide sequences that encode NHPs sharing structural similarity with animal **kinases** including NIMA (never in mitosis A) related **kinases**, serine-threonine **kinases**, calcium/calmodulin-dependent **kinases**, and myosin light chain **kinases**, when knocked out provide a method for identifying phenotypic **expression** of the particular gene as well as a method of assigning function to previously unknown genes, for identifying coding sequence and mapping a unique gene to a particular chromosome and in the identification of biologically relevant splice junctions. Complementary sequences of (I) that hybridize to (I) can be used in conjunction with PCR to screen libraries, isolate **clones** and prepare **cloning** and sequencing templates. Such oligonucleotides can also be used as hybridization probes for screening libraries, for assessing gene **expression** patterns. The probes are useful for identification, selection and validation of novel molecular targets for drug discovery. Labeled NHP nucleotide probes can be used to screen a **human** genomic library which is helpful for identifying polymorphisms, determining the genomic structure of a given locus/allele and designing diagnostic tests. The probe sequences also have use in defining and monitoring both drug action and toxicity. Oligonucleotides complementary to NHPs may encode or act as NHP antisense molecules, or may be used as part of ribozyme and/or triple helix sequences. Addressable arrays comprising the NHP polynucleotides can be used to identify and characterize the temporal and tissue **expression** of a gene. The use of addressable arrays comprising the NHP polynucleotide sequence provide detailed information about transcriptional changes involved in specific pathway, potentially leading to the identification of novel components or gene functions that manifest themselves as novel phenotypes. Microarray formats comprising NHP polynucleotide sequences can be used to screen collections of genetic material from patients who have a particular medical condition. The sequences are also useful for identifying mutations associated with a particular disease and also as a

prognostic or diagnostic assay. (I) is also useful in the molecular mutagenesis/evolution of proteins that are at least partially encoded by the described novel sequences.
EXAMPLE - None given.(46 pages)

L19 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:693529 HCAPLUS
DOCUMENT NUMBER: 135:268247
TITLE: Protein and cDNA sequences of novel **human** phospholipases homologs and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S): Hu, Yi; Nepomnichy, Boris; **Donoho, Gregory**; Hilbun, Erin; Turner, C. Alexander, Jr.; Abuin, Alejandro; Friedrich, Glenn; Zambrowicz, Brian; Sands, Arthur T.
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001068871	A2	20010920	WO 2001-US7994	20010313
WO 2001068871	A3	20020321		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002081595	A1	20020627	US 2001-804969	20010313
EP 1317551	A2	20030611	EP 2001-920329	20010313
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004500107	T2	20040108	JP 2001-567355	20010313

PRIORITY APPLN. INFO.:			
US 2000-188885P	P	20000313
US 2000-189693P	P	20000315
WO 2001-US7994	W	20010313

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated NHPs, which shares structural similarity with animal phospholipases, including phospholipases C δ-4. The NHPs are novel proteins that are **expressed** in, inter alia, **human** cell lines and **human** fetal and adult brain, cerebellum, spinal cord, **thymus**, **spleen**, **testis**, thyroid, adrenal gland, small intestine, colon, adipose, rectum, and placenta cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate NHP activity or levels. Also disclosed are methods for utilizing NHP in drug screening assays and in therapy directed against diseases associated with inappropriate NHP activity or levels.

L19 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:693527 HCAPLUS
DOCUMENT NUMBER: 135:252804
TITLE: Protein and cDNA sequences of novel **human** G protein-coupled receptor **kinase** homologs and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S): **Walke, D. Wade**; Wilganowski, Nathaniel L.;

Turner, C. Alexander, Jr.
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001068869	A2	20010920	WO 2001-US7500	20010308
WO 2001068869	A3	20020124		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002042503	A1	20020411	US 2001-802117	20010308
US 6444456	B2	20020903		
EP 1263967	A2	20021211	EP 2001-916502	20010308
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004500106	T2	20040108	JP 2001-567353	20010308
US 2003004328	A1	20030102	US 2002-217745	20020812

PRIORITY APPLN. INFO.:

US 2000-188449P	P	20000310
US 2001-802117	A1	20010308
WO 2001-US7500	W	20010308

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated NHPs, which shares structural similarity with animal **kinase**, including G protein-coupled receptor **kinases**. The NHPs are novel proteins that are **expressed** in, inter alia, **human** cell lines and **human** fetal and adult brain, pituitary, cerebellum, spinal cord, **thymus**, kidney, fetal liver, prostate, **testis**, adrenal gland, small intestine, pericardium, mammary gland, placenta, uterus, and skeletal muscle cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate NHP activity or levels. Also disclosed are methods for utilizing NHP in drug screening assays and in therapy directed against diseases associated with inappropriate NHP activity or levels.

L19 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:618177 HCAPLUS
DOCUMENT NUMBER: 135:191337
TITLE: Protein and cDNA sequences of novel **human** **kinase** homologs and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S): **Walke, D. Wade**; Hu, Yi; Nepomnichy, Boris; Turner, C. Alexander, Jr.; Zambrowicz, Brian
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2001061016	A2	20010823	WO 2001-US5356		20010215
WO 2001061016	A3	20020207			

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002038011	A1	20020328	US 2001-783320		20010215
EP 1257652	A2	20021120	EP 2001-912839		20010215

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2003531577	T2	20031028	JP 2001-559853		20010215
PRIORITY APPLN. INFO.:			US 2000-183582P	P	20000218
			US 2000-184014P	P	20000222
			WO 2001-US5356	W	20010215

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated NHPs, which shares structural similarity with animal **kinases**, including cell division control protein **kinases**, serine/threonine protein **kinases** and membrane-associated guanylate **kinases** (MAGUKs). The NHPs are novel proteins that are **expressed** in, inter alia, **human** cell lines and **human** fetal and adult brain, pituitary, cerebellum, **thymus**, **spleen**, lymph node, **bone marrow**, trachea, fetal and adult liver, prostate, **testis**, thyroid, adrenal gland, **pancreas**, salivary gland, stomach, small intestine, colon, uterus, placenta, mammary gland, adipose, esophagus, bladder, cervix, rectum, pericardium, hypothalamus, ovary, fetal and adult kidney, and fetal lung cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate NHP activity or levels. Also disclosed are methods for utilizing NHP in drug screening assays and in therapy directed against diseases associated with inappropriate NHP activity or levels.

L19 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	2001:435241 HCAPLUS
DOCUMENT NUMBER:	135:41828
TITLE:	Protein and cDNA sequences of a novel **human** protein **kinase** homolog and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S):	**Donoho, Gregory**; Scoville, John; Turner, C. Alexander, Jr.; Friedrich, Glenn; Zambrowicz, Brian; Abuin, Alejandro; Sands, Arthur T.
PATENT ASSIGNEE(S):	Lexicon Genetics Incorporated, USA
SOURCE:	PCT Int. Appl., 31 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001042435	A2	20010614	WO 2000-US33240	20001207
WO 2001042435	A3	20011108		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1240187	A2	20020918	EP 2000-989231	20001207
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003064495	A1	20030403	US 2000-733388	20001207
US 6602698	B2	20030805		
JP 2004504005	T2	20040212	JP 2001-544312	20001207
US 2004014112	A1	20040122	US 2003-446175	20030527
PRIORITY APPLN. INFO.:			US 1999-169428P	P 19991207
			US 2000-733388	A1 20001207
			WO 2000-US33240	W 20001207

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated NHPs, which shares structural similarity with animal **kinases**, and particularly calcium/calmodulin-dependant protein **kinases** and serin/threonine protein **kinases**. The NHP is a novel protein that is **expressed** in, inter alia, **human** cell lines, **testis**, pituitary, **fetal brain**, **thymus** , **spleen**, cerebellum, trachea, thyroid, adrenal gland, fetal kidney, colon, uterus, **pancreas** and lung cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate NHP activity or levels. Also disclosed are methods for utilizing NHP in drug screening assays and in therapy directed against diseases associated with inappropriate NHP activity or levels.

L19 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	2001:247510 HCAPLUS
DOCUMENT NUMBER:	134:261891
TITLE:	Protein and cDNA sequences of **human** serine/threonine protein **kinase** and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S):	**Donoho, Gregory**; Turner, C. Alexander, Jr.; Nehls, Michael; Friedrich, Glenn; Zambrowicz, Brian; Sands, Arthur T.
PATENT ASSIGNEE(S):	Lexicon Genetics Incorporated, USA
SOURCE:	PCT Int. Appl., 38 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001023579	A1	20010405	WO 2000-US26621	20000927
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1220927	A1	20020710	EP 2000-966996	20000927
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003510082	T2	20030318	JP 2001-526961	20000927
US 6716616	B1	20040406	US 2000-671050	20000927
PRIORITY APPLN. INFO.:			US 1999-156511P	P 19990928
			WO 2000-US26621	W 20000927

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated NHPs, which shares substantial sequence homol. with animal **kinases**, and more particular serine/threonine protein **kinases**. While NHP shares sequence homol. with other serine/threonine protein **kinases**, its primary sequence is unique. Its **expression** is detected in various **human** tissues including brain, pituitary, spinal cord, **spleen**, trachea, kidney, prostate, **testis**, adrenal gland cells, and gene trapped **human** cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate NHP activity or levels. Also disclosed are methods for utilizing NHP in drug screening assays and in therapy directed against diseases associated with inappropriate NHP activity or levels.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> d his

     (FILE 'HOME' ENTERED AT 10:04:50 ON 28 SEP 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 10:05:11 ON 28 SEP 2004
L1      1239787 S KINASE?
L2       455391 S HUMAN AND L1
L3      6718512 S CLON? OR EXPRESS? OR RECOMBINANT
L4       224730 S L2 AND L3
L5       606832 S "FETAL BRAIN" OR CEREBELUM OR "BONE MARROW"
L6      1358853 S THYMUS OR PANCREAS OR SPLEEN OR TESTIS
L7         6015 S L4 AND L5
L8         8577 S L4 AND L6
L9        13888 S L7 OR L8
L10        3209 S "NHP"
L11          13 S L9 AND L10
L12          11 DUP REM L11 (2 DUPLICATES REMOVED)
                E WALKE D W/AU
L13         115 S E3-E6
                E HILBUN E/AU
L14          24 S E3
                E DONOHO G/AU
L15         149 S E3-E9
                E TURNER A/AU
L16        1250 S E3
L17        1508 S L13 OR L14 OR L15 OR L16
L18           6 S L9 AND L17
L19           6 DUP REM L18 (0 DUPLICATES REMOVED)

=> s l9 and l4
L20      13888 L9 AND L4

=> s l12 and l10
L21         11 L12 AND L10

=> s l17 and l4
L22         34 L17 AND L4

=> dup rem l22
PROCESSING COMPLETED FOR L22
L23          20 DUP REM L22 (14 DUPLICATES REMOVED)

=> d 1-20 ibib ab

L23  ANSWER 1 OF 20  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2004:739850  HCAPLUS
```

TITLE: Protein and cDNA sequences of a novel **human** protein **kinase**
INVENTOR(S): **Walke, D. Wade**; Scoville, John; Friddle, Carl Johan
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 17 pp., Division of U. S. Ser. No. 196,927.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004175749	A1	20040909	US 2004-803278		20040318
PRIORITY APPLN. INFO.:			US 2001-293248P	P	20010524
			US 2002-196927	A3	20020520

AB Novel **human** polynucleotide and polypeptide sequences are disclosed that can be used in therapeutic, diagnostic, and pharmacogenomic applications.

L23 ANSWER 2 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2004-04631 BIOTECHDS
TITLE: New **human kinase** nucleic acid molecules, useful for diagnosis, drug screening, clinical trial monitoring and treating diseases or disorders associated with biological disorders or imbalances;
involving vector-mediated gene transfer and **expression** in host cell for use in gene therapy
AUTHOR: HU Y; NEPOMNICHY B; GERHARDT B; **WALKE D W**; FRIDDLE C J
PATENT ASSIGNEE: HU Y; NEPOMNICHY B; GERHARDT B; WALKE D W; FRIDDLE C J
PATENT INFO: US 2003175949 18 Sep 2003
APPLICATION INFO: US 2003-430797 6 May 2003
PRIORITY INFO: US 2003-430797 6 May 2003; US 2000-243893 27 Oct 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2003-898545 [82]
AB DERWENT ABSTRACT:
NOVELTY - An isolated nucleic acid molecule comprising a sequence of 2829 (S1) or 927 (S2) bp, fully defined in the specification, is new.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for an isolated nucleic acid **expression** vector comprising a promoter element operatively positioned to **express** a transcript encoding a sequence of 942 or 308 amino acids, fully defined in the specification.
BIOTECHNOLOGY - Preferred Molecule: The nucleic acid molecule encodes a sequence of 942 or 308 amino acids, fully defined in the specification. It hybridizes under stringent conditions to S1 or its complement.
ACTIVITY - None given.
MECHANISM OF ACTION - Gene therapy.
USE - The nucleic acid molecules are useful for diagnosis, drug screening, clinical trial monitoring and treating diseases or disorders associated with biological disorders or imbalances. (17 pages)

L23 ANSWER 3 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2003-23467 BIOTECHDS
TITLE: New nucleic acid molecules encoding novel **human** proteins (NHPs), e.g. sharing sequence similarity with animal **kinases** or receptor tyrosine **kinases**, useful for diagnosis, drug screening, and treatment of diseases and disorders;
virus vector-mediated gene transfer and **expression**

in bacterium, yeast, fungus, insect, mammal cell for **recombinant** protein-tyrosine-**kinase** receptor

AUTHOR: HU Y; NEPOMNICHY B; GERHARDT B; **WALKE D W**; FRIDDLE C J

PATENT ASSIGNEE: LEXICON GENETICS INC

PATENT INFO: US 6586230 1 Jul 2003

APPLICATION INFO: US 2001-4542 23 Oct 2001

PRIORITY INFO: US 2001-4542 23 Oct 2001; US 2000-243893 27 Oct 2000

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2003-634547 [60]

AB DERWENT ABSTRACT:

NOVELTY - An isolated **human** nucleic acid molecule, comprising a sequence of 2829 or 927 base pairs (bp), or encodes a sequence of 942 amino acids, fully defined in the specification, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following: (1) an isolated nucleic acid **expression** vector comprising the nucleic acid molecule; and (2) a host cell comprising the **expression** vector.

WIDER DISCLOSURE - Also disclosed as new are: (1) encoded proteins, fusion proteins, polypeptides and peptides; (2) antibodies to the encoded proteins; (3) genetically engineered animals that either lack or over **express** the disclosed genes; (4) antagonist or agonist of proteins, including small molecules, large molecules; (5) mutant NHPs and other compounds that modulate the **expression** or activity of the proteins; and (6) transgenic animals that **express** a NHP sequence or knock-outs that do not **express** a functional NHP.

BIOTECHNOLOGY - Preparation: NHP gene homologs can be isolated from nucleic acid from an organism of interest by performing polymerase chain reaction (PCR) using two degenerate or wobble oligonucleotide primer pools designed on the basis of amino acid sequences. The PCR product can be subcloned and sequenced to ensure that the amplified sequences represent the sequence of the desired NHP gene. The PCR fragment can then be used to isolate a full length cDNA **clone** by a variety of methods. For example, the amplified fragment can be labeled and used to screen a cDNA library, such as a bacteriophage cDNA library. A cDNA encoding a mutant NHP sequence can be isolated, for example, by using PCR. In this case, the first cDNA strand may be synthesized by hybridizing an oligo-dT oligonucleotide to mRNA isolated from tissue known or suspected to be **expressed** in an individual putatively carrying a mutant NHP allele, and by extending the new strand with reverse transcriptase. Preferred Host: Escherichia coli, bacillus subtilis, Saccharomyces, Pichia, insect cell, Chinese hamster ovary, baby hamster kidney, 293 cell, 3T3 cell. Preferred Vector: Baculo virus, cauliflower mosaic virus, tobacco mosaic virus.

ACTIVITY - Neuroprotective; Nootropic.

MECHANISM OF ACTION - Gene therapy; **Human** protein (Anta)gonist; Antisense therapy. No biological data given.

USE - The nucleic acid molecules are useful for diagnosis, drug screening, clinical trial monitoring, the treatment of biological disorders, imbalances disorder and mental disorders, and cosmetic and nutriceutical applications. The nucleic acid molecules are useful as hybridization probe, assessing gene **expression** pattern, polymorphisms identification, drug screening, and pharmacogenomics. NHP oligonucleotides can be used for molecular mutagenesis or evolution of protein, generation of antibodies as reagent in diagnostic assay, identification of other cellular gene product related to a NHP as reagents in assays for screening for compound, chromosome mapping and gene therapy.

EXAMPLE - No example given.(17 pages)

L23 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:254176 HCAPLUS

DOCUMENT NUMBER: 138:283310
TITLE: Protein and cDNA sequences of a **human** protein **kinase**
INVENTOR(S): **Walke, D. Wade**; Hilbun, Erin; **Donoho, Gregory**; Turner, C. Alexander, Jr.
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: U.S., 11 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 6541252	B1	20030401	US 2001-854856		20010514
PRIORITY APPLN. INFO.:			US 2000-206015P	P	20000519

AB The invention provides protein and cDNA sequences of a **human** protein that has structural similarity with animal protein **kinases**. The invention further relates to the use of protein **kinase** in therapeutic, diagnostic, and pharmacogenomic applications.
REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:813741 HCAPLUS
DOCUMENT NUMBER: 140:368195
TITLE: A multicentre phase II trial of bryostatin-1 in patients with advanced renal cancer
AUTHOR(S): Madhusudan, S.; Protheroe, A.; Propper, D.; Han, C.; Corrie, P.; Earl, H.; Hancock, B.; Vasey, P.; **Turner, A.**; Balkwill, F.; Hoare, S.; Harris, A. L.
CORPORATE SOURCE: Cancer Research UK Medical Oncology Unit, Churchill Hospital, Oxford, UK
SOURCE: British Journal of Cancer (2003), 89(8), 1418-1422
CODEN: BJCAAI; ISSN: 0007-0920
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Protein **kinase** C (PKC) has a critical role in several signal transduction pathways, and is involved in renal cancer pathogenesis. Bryostatin-1 modulates PKC activity and has antitumor effects in preclin. studies. We conducted a multicenter phase II clin. trial in patients with advanced renal cancer to determine the response rate, immunomodulatory activity and toxicity of bryostatin-1 given as a continuous 24 h infusion weekly for 3 out of 4 wk at a dose of 25 μg m-2. In all, 16 patients were recruited (11 males and 5 females). The median age was 59 yr (range 44-68). Patients had been treated previously with nephrectomy (8) and/or interferon therapy (9) and/or hormone therapy (4) and/or radiotherapy (6). Eight, 5 and 3 patients had performance statuses of 0, 1 and 2, resp. A total of 181 infusions were administered with a median of 12 infusions per patient (range 1-29). Disease response was evaluable in 13 patients. Three patients achieved stable disease lasting for 10.5, 8 and 5.5 mo, resp. No complete responses or partial responses were seen. Myalgia, fatigue, nausea, headache, vomiting, anorexia, anemia and lymphopenia were the commonly reported side effects. Assessment of biol. activity of bryostatin-1 was carried out using the whole-blood cytokine release assay in six patients, two of whom had a rise in IL-6 levels 24 h after initiating bryostatin-1 therapy compared to pretreatment values. However, the IL-6 level was found to be significantly lower at day 28 compared to the pretreatment level in all six patients analyzed.
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 6 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 1
ACCESSION NUMBER: 2003-08154 BIOTECHDS
TITLE: New **human kinase** proteins and polynucleotides, useful for cosmetic and nutriceutical applications, drug screening, clinical trial monitoring, diagnosing or treating diseases associated with biological disorders or imbalances;
vector-mediated gene transfer and **expression** in host cell for **recombinant** protein production and gene therapy
AUTHOR: YU X; XIE Q; ABUIN A; **WALKE D W**
PATENT ASSIGNEE: LEXICON GENETICS INC
PATENT INFO: WO 2002090517 14 Nov 2002
APPLICATION INFO: WO 2002-US14669 8 May 2002
PRIORITY INFO: US 2001-289727 9 May 2001; US 2001-289727 9 May 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2003-103514 [09]
AB DERWENT ABSTRACT:
NOVELTY - A substantially isolated protein having the **kinase** activity of a protein comprising a fully defined sequence of 479 (S2) or 94 (S4) amino acids given in the specification, is new. The protein is encoded by a nucleotide sequence that hybridizes to a sequence of 1440 (S1) or 285 (S3) base pairs (bp) fully defined in the specification, under highly stringent conditions.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an isolated nucleic acid molecule comprising: (a) the sequence of S1 or S3; (b) a nucleotide sequence that encodes the amino acid sequence of S2, and hybridizes under stringent conditions to the nucleotide sequence of S1 or its complement; or (c) a nucleotide sequence encoding the amino acid sequence of S2 or S4.

WIDER DISCLOSURE - Also disclosed are host cell **expression** systems, fusion proteins, polypeptides and peptides, antibodies to the encoded proteins and peptides, genetically engineered animals that either lack or over **express** the polynucleotides, agonists and antagonists of the proteins, and other compounds that modulate the **expression** or activity of the proteins encoded by the polynucleotides.

ACTIVITY - None given.

MECHANISM OF ACTION - **Kinase** Inhibitor; **Kinase** Stimulator; Gene Therapy.

USE - The polynucleotides, proteins, antibodies, agonists and antagonists of the proteins are useful for drug screening, clinical trial monitoring, and diagnosing or treating diseases or disorders associated with biological disorders or imbalances. The proteins and polynucleotides are also useful in cosmetic and nutriceutical applications, for identifying protein coding sequences and mapping a unique gene to a particular chromosome. The sequence of the polynucleotides and proteins can also be used as additional DNA markers for restriction fragment length polymorphism analysis, or in forensic biology.

EXAMPLE - No example given. (40 pages)

L23 ANSWER 7 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 2
ACCESSION NUMBER: 2002-20053 BIOTECHDS
TITLE: Novel **human kinase** polynucleotide encoding a protein that shares structural similarity with animal **kinases** for therapeutic, diagnostic and pharmacogenomic applications;
vector-mediated **recombinant** protein gene transfer and **expression** in host cell for use in diagnosis, therapy, pharmacogenetics, mapping, forensics,

DNA probe and DNA microarray
AUTHOR: HU Y; KIEKE J A; **DONOHO G**
PATENT ASSIGNEE: LEXICON GENETICS INC
PATENT INFO: WO 2002055685 18 Jul 2002
APPLICATION INFO: WO 2000-US47606 11 Dec 2000
PRIORITY INFO: US 2000-254744 11 Dec 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-566739 [60]
AB DERWENT ABSTRACT:
NOVELTY - A **human kinase** polynucleotide (I) encoding a protein that shares structural similarity with animal **kinases**, selected from a polynucleotide that encodes a sequence of 1036 amino acids fully defined in the specification,and a polynucleotide that hybridizes under highly stringent conditions to a sequence of 3111 base pairs fully defined in the specification or its complement, is new.

WIDER DISCLOSURE - Disclosed are: (1) a host cell **expression** system **expressing** (I); (2) a protein encoded by (I); (3) a fusion protein comprising the protein encoded by (I); (4) antibodies or anti-idiotypic antibodies that binds specifically to the protein encoded by (I); (5) a genetically engineered animal that either lacks or overexpresses (I); (6) antagonists or agonists of the protein encoded by (I); (7) a compound that modulates the **expression** or activity of the protein encoded by (I); (8) a pharmaceutical formulation and treatment of biological disorders; (9) a protein that is functionally equivalent to the protein encoded by (I); and (10) a deoxyribonucleic acid (DNA) vector that contains the **human kinase** coding sequences and/or their complements.

USE - (I) is useful in therapeutic, diagnostic and pharmacogenomic applications and for identifying compounds that modulate, i.e. act as agonists or antagonists of the gene **expression** or gene product activity. (I) is useful for the identification of protein coding sequences, for mapping a unique gene to a particular chromosome, as additional DNA markers for restriction fragment length polymorphism (RFLP) analysis and in forensic biology, for screening libraries, isolating **clones**, preparing, **cloning** and sequencing templates, as hybridization probes, in microarrays or other assay formats, to screen collections of genetic material from patients who have a particular medical condition, to identify mutations associated with a particular disease and also as a diagnostic or prognostic assay. (I) is useful for the detection of mutant **human** proteins, or inappropriately **expressed** proteins for the diagnosis of disease, for screening for drugs effective in the treatment of the symptomatic or phenotypic manifestations of perturbing the normal function of the protein in the body, for generation of antibodies, for identification of other cellular gene products related to the protein, and as reagents in assays for screening for compounds that can be used as pharmaceutical agents in the therapeutic treatment of mental, biological or medical disorders and diseases.

EXAMPLE - No suitable example given.(41 pages)

L23 ANSWER 8 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 3
ACCESSION NUMBER: 2002-19616 BIOTECHDS
TITLE: Novel nucleic acid molecule encoding a **human kinase**, useful in therapeutic, diagnostic and pharmacogenomic applications, as DNA markers for restriction fragment length polymorphism analysis and in forensic biology ;

recombinant enzyme protein and agonist and antagonist use in disease therapy and gene therapy
AUTHOR: **WALKE D W**; MARICAR M; YU X; FRIDDLE C J
PATENT ASSIGNEE: LEXICON GENETICS INC
PATENT INFO: WO 2002046428 13 Jun 2002

APPLICATION INFO: WO 2000-US48533 7 Dec 2000
PRIORITY INFO: US 2000-251941 7 Dec 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-527921 [56]
AB DERWENT ABSTRACT:
NOVELTY - An isolated nucleic acid molecule (I) comprising a nucleotide sequence encoding a sequence (S1) of 424 amino acids fully defined in the specification, and hybridizes under stringent conditions to a sequence (S2) of 1275 nucleotides fully defined in the specification, or its complement, is new.

WIDER DISCLOSURE - Also disclosed are: (1) a host cell **expression** system **expressing** (I); (2) a protein encoded by (I); (3) a fusion protein comprising the protein encoded by (I); (4) antibodies or anti-idiotypic antibodies to the protein encoded by (I); (5) a genetically engineered animal that either lacks or overexpresses (I); (6) antagonists or agonists of the protein encoded by (I); (7) a compound that modulates the **expression** or activity of the protein encoded by (I); (8) a pharmaceutical formulation and method for treating biological disorders; (9) a protein that is functionally equivalent to the protein encoded by (I); and (10) a DNA vector that contains the **human kinase** coding sequences and/or their complements.

USE - (I) is useful in therapeutic, diagnostic and pharmacogenomic applications, and for identifying compounds that modulate, i.e., act as agonists or antagonists of the gene **expression** or gene product activity. (I) is useful for the identification of protein coding sequences, for mapping a unique gene to a particular chromosome, as additional DNA markers for restriction fragment length polymorphism (RFLP) analysis and in forensic biology, for screening libraries, isolating **clones**, preparing, **cloning** and sequencing templates, as hybridization probes, in microarrays or other assay formats, to screen collections of genetic material from patients who have a particular medical condition, to identify mutations associated with a particular disease and also as a diagnostic or prognostic assay. (I) is useful for the detection of mutant **human** proteins, or inappropriately **expressed** proteins for the diagnosis of disease, for screening for drugs effective in the treatment of the symptomatic or phenotypic manifestations of perturbing the normal function of the protein in the body, for generation of antibodies, for identification of other cellular gene products related to the protein, and as reagents in assays for screening for compounds that can be used as pharmaceutical agents in the therapeutic treatment of mental, biological or medical disorders and diseases.

EXAMPLE - None given. (37 pages)

L23 ANSWER 9 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-20038 BIOTECHDS
TITLE: Novel **human kinase** polynucleotide useful in therapeutic, diagnostic and pharmacogenomic applications; **recombinant** enzyme protein production via plasmid **expression** in host cell use in disease therapy and gene therapy
AUTHOR: FRIDDLE C J; **HILBUN E**; MATHUR B; TURNER C A
PATENT ASSIGNEE: LEXICON GENETICS INC
PATENT INFO: WO 2002042438 30 May 2002
APPLICATION INFO: WO 2000-US43825 20 Nov 2000
PRIORITY INFO: US 2000-252011 20 Nov 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-566563 [60]
AB DERWENT ABSTRACT:
NOVELTY - A **human kinase** polynucleotide (I) selected from a polynucleotide comprising a 2079 base pair sequence (S1) that

encodes a 692 or 817 amino acid sequence (S2), a polynucleotide that hybridizes to a 2454 base pair sequence (S3) or its complement, and a polynucleotide comprising at least 24 contiguous base pairs from S3, where S1, S2 or S3 is fully defined in the specification, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an isolated **expression** vector (II) comprising a promoter element operatively positioned to **express** a transcript encoding the 817 amino acid sequence.

WIDER DISCLOSURE - Also disclosed are: (1) a host cell **expression** system **expressing** (I); (2) a protein encoded by (I); (3) a fusion protein comprising the protein encoded by (I); (4) antibodies or anti-idiotypic antibodies to the protein encoded by (I); (5) a genetically engineered animal that either lacks or over **expresses** (I); (6) antagonists or agonists of the protein encoded by (I); (7) a compound that modulates the **expression** or activity of the protein encoded by (I); (8) a pharmaceutical formulation and method for treating biological disorders; and (9) a protein that is functionally equivalent to the protein encoded by (I).

USE - (I) is useful in therapeutic, diagnostic and pharmacogenomic applications, and for identifying compounds that modulate, i.e., act as agonists or antagonists of the gene **expression** or gene product activity. (I) is useful for the identification of protein coding sequences, for mapping a unique gene to a particular chromosome, as additional DNA markers for restriction fragment length polymorphism (RFLP) analysis and in forensic biology, for screening libraries, isolating **clones**, preparing **cloning** and sequencing templates, as hybridization probes, in microarrays or other assay formats, to screen collections of genetic material from patients who have a particular medical condition, to identify mutations associated with a particular disease and also as a diagnostic or prognostic assay. (I) is useful for the detection of mutant **human** proteins, or inappropriately **expressed** proteins for the diagnosis of disease, for screening for drugs effective in the treatment of the symptomatic or phenotypic manifestations of perturbing the normal function of the protein in the body, for generation of antibodies, for identification of other cellular gene products related to the protein, and as reagents in assays for screening for compounds that can be used as pharmaceutical agents in the therapeutic treatment of mental, biological or medical disorders and diseases.

EXAMPLE - None given. (43 pages)

L23 ANSWER 10 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-12398 BIOTECHDS
TITLE: Novel polynucleotide encoding novel **human** protein sharing structural similarity with animal **kinases** e.g. serine-threonine, calcium/calmodulin-dependent, and myosin light chain **kinases**, useful as probes and primers;
vector-mediated gene transfer, **expression** in host cell, antibody, antisense oligonucleotide and ribozyme for **recombinant** protein production, drug screening and gene therapy
AUTHOR: FRIDDLE C J; **HILBUN E**; NEPOMNICHY B; HU Y
PATENT ASSIGNEE: LEXICON GENETICS INC
PATENT INFO: WO 2002018555 7 Mar 2002
APPLICATION INFO: WO 2000-US26776 31 Aug 2000
PRIORITY INFO: US 2000-229280 31 Aug 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-292200 [33]
AB DERWENT ABSTRACT:

NOVELTY - An isolated novel **human** protein (NHP) encoding nucleic acid, where the NHP shares structural similarity with animal **kinases** e.g. serine-threonine, calcium/calmodulin-dependent, and

myosin light chain **kinases**, is new.

DETAILED DESCRIPTION - An isolated novel **human** protein (NHP) encoding nucleic acid, where the NHP shares structural similarity with animal **kinases** e.g. serine-threonine, calcium/calmodulin-dependent, and myosin light chain **kinases**, is new. The NHP nucleic acid comprises a nucleotide sequence encoding a fully defined sequence of 683 (S2), 654 (S4), 388 (S7) and 398 (S9) amino acids as given in the specification, and which hybridizes under stringent conditions to a fully defined sequence of 2052 (S1) or 1167 (S6) nucleotides as given in specification, or its complement. An INDEPENDENT CLAIM is also included for an isolated nucleic acid molecule that comprises at least 24 contiguous bases of (S6).

WIDER DISCLOSURE - The following are disclosed: (1) novel **human** proteins (NHP) having a fully defined sequence of (S2), (S4), (S7) or (S9) encoded by NHP polynucleotides where the proteins are useful for generating antibodies, reagents in diagnostic assays, identification of other cellular gene products related to NHP, as reagents in assays for screening compounds that can be used as pharmaceutical reagents for treating mental, biological or medical disorders and diseases; (2) a nucleic acid selected from: (a) a sequence that encode mammalian homologs of NHP including the specifically described NHPs and the NHP gene products (b) a sequence that encode one or more portions of the NHPs that correspond to functional domains, and the polypeptide products specified by such nucleotide sequences (c) a sequence that encode mutant versions, engineered or naturally occurring, of the described NHPs in which all or part of at least one domain is deleted or altered, and the polypeptide products specified by such nucleotide sequences (d) a sequence that encode fusion proteins containing a coding region from an NHP or one of its domains (e.g. receptor or ligand binding domain) fused to another peptide or polypeptide, or (e) therapeutic or diagnostic derivatives of the polynucleotides; (3) agonist and antagonist of NHPs; (4) compounds that modulate the **expression** or activity of NHPs and nucleotide sequences (nucleotide constructs) that can be used to inhibit the **expression** of NHP (e.g., antisense, ribozyme molecules, etc.,) or to promote the **expression** of NHP; (5) transgenic animals that **express** NHP transgene or knock-outs that do not **express** a functional NHP; (6) processes of identifying compounds that modulate i.e., act as agonist or antagonist of NHP **expression** and/or NHP activity; (7) antibodies against NHP and idiotypic antibodies against anti-NHP antibodies; (8) fusion proteins comprising NHP protein; (9) degenerate nucleic acid variants of the NHP polynucleotide sequences; (10) DNA vectors that contain any of the NHP coding sequences and/or their complements; (11) genetically engineered host cells **expressing** NHP coding sequences operatively associated with a regulatory element; (12) analogues, derivatives and NHP homologues from other species; (13) proteins that are functionally equivalent to NHP encoded by the above described nucleotide sequences; and (14) pharmaceutical formulations comprising the NHP polynucleotide sequences.

BIOTECHNOLOGY - Isolation: The NHP polynucleotides were complied from sequences available in GENBANK, and cDNAs generated from kidney, testis, trachea, esophagus, pituitary, **human** gene trapped products ((S2) and (S4)) or bone marrow and skeletal muscle mRNAs.

ACTIVITY - None given. No biological data is given.

MECHANISM OF ACTION - Gene therapy. No biological data is given.

USE - The NHP polynucleotide sequences that encode NHPs sharing structural similarity with animal **kinases** including NIMA (never in mitosis A) related **kinases**, serine-threonine **kinases**, calcium/calmodulin-dependent **kinases**, and myosin light chain **kinases**, when knocked out provide a method for identifying phenotypic **expression** of the particular gene as well as a method of assigning function to previously unknown genes, for identifying coding sequence and mapping a unique gene to a particular chromosome and in the identification of biologically relevant splice junctions.

Complementary sequences of (I) that hybridize to (I) can be used in conjunction with PCR to screen libraries, isolate **clones** and prepare **cloning** and sequencing templates. Such oligonucleotides can also be used as hybridization probes for screening libraries, for assessing gene **expression** patterns. The probes are useful for identification, selection and validation of novel molecular targets for drug discovery. Labeled NHP nucleotide probes can be used to screen a **human** genomic library which is helpful for identifying polymorphisms, determining the genomic structure of a given locus/allele and designing diagnostic tests. The probe sequences also have use in defining and monitoring both drug action and toxicity. Oligonucleotides complementary to NHPs may encode or act as NHP antisense molecules, or may be used as part of ribozyme and/or triple helix sequences. Addressable arrays comprising the NHP polynucleotides can be used to identify and characterize the temporal and tissue **expression** of a gene. The use of addressable arrays comprising the NHP polynucleotide sequence provide detailed information about transcriptional changes involved in specific pathway, potentially leading to the identification of novel components or gene functions that manifest themselves as novel phenotypes. Microarray formats comprising NHP polynucleotide sequences can be used to screen collections of genetic material from patients who have a particular medical condition. The sequences are also useful for identifying mutations associated with a particular disease and also as a prognostic or diagnostic assay. (I) is also useful in the molecular mutagenesis/evolution of proteins that are at least partially encoded by the described novel sequences.

EXAMPLE - None given.(46 pages)

L23 ANSWER 11 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 4

ACCESSION NUMBER: 2002-04068 BIOTECHDS

TITLE: New nucleic acid molecules encoding new **human** proteins, useful in diagnosis, drug screening, clinical trails monitoring, treatment of physiological disorders and cosmetic or nutriceutical applications; vector-mediated **kinase** gene transfer and **expression** in host cell, antibody, DNA probe, DNA primer and transgenic animal for disease diagnosis and gene therapy

AUTHOR: Hu Y; Nepomnichy B; Wang X; **Donoho G**; Scoville J; **Walke D W**

PATENT ASSIGNEE: Lexicon-Genetics

LOCATION: The Woodlands, TX, USA.

PATENT INFO: WO 2001081557 1 Nov 2001

APPLICATION INFO: WO 2001-US13149 24 Apr 2001

PRIORITY INFO: US 2000-201227 1 May 2000; US 2000-199499 25 Apr 2000

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2002-034442 [04]

AB A nucleic acid (I) encoding a new **human kinase** (II) with a 1,545 or 1,224 bp DNA sequence fully defined encoding a 514, 407 or 396 amino acid protein sequence fully defined is claimed. Also disclosed as new are: vectors containing (I); host cell containing (I); fusion proteins containing (I); antibodies and anti-idiotype for (I); transgenic animals that lack or overexpress (I); agonist and antagonist of (I); and compounds that modulate the **expression** or activity of (I). (I) gene was isolated by polymerase chain reaction using DNA primers. (I) can be used for diagnosis, drug screening, clinical trail monitoring, physiological disorder therapy and cosmetic or nutriceutical applications. (I) can also be used for gene mapping and as a DNA probe for screening libraries and assessing gene **expression** profiles and for the detection of mutants for disease diagnosis. (I) is also useful in pharmacogenomics. (44pp)

L23 ANSWER 12 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 5
ACCESSION NUMBER: 2002-01107 BIOTECHDS
TITLE: New polynucleotides encoding **human** proteins that share sequence similarity with animals **kinases** e.g. G-protein coupled receptor **kinases**, useful for drug screening, diagnosis and in gene therapy of biological disorders;
involving vector-mediated gene transfer for **expression** in host cell, agonist, antagonist, antisense, ribozyme and antibody
AUTHOR: **Walke D W**; Wilganowski N L; Turner Jr C A
PATENT ASSIGNEE: Lexicon-Genetics
LOCATION: The Woodlands, TX, USA.
PATENT INFO: WO 2001068869 20 Sep 2001
APPLICATION INFO: WO 2001-US7500 8 Mar 2001
PRIORITY INFO: US 2000-188449 10 Mar 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-570872 [64]
AB An isolated nucleic acid molecule (I) comprising a nucleotide sequence encoding new **human** proteins (NHPs), in particular proteins that share sequence similarity with animal **kinases** including G-protein coupled receptor **kinases**, of 553 or 353 amino acids and that hybridizes under stringent conditions to a nucleotide sequence of 1,662 bp or its complement, is claimed. Also claimed is an isolated nucleic acid molecule comprising at least 24 contiguous bases of the sequence. NHP oligonucleotides are useful as hybridization probes for screening libraries and assessing gene **expression** patterns. Sequences derived from regions adjacent to the intron/exon boundaries of NHP gene can be used to design DNA primers that can be used in prognostics, diagnostics and pharmacogenomics. The NHP nucleotide sequences are also useful in drug screening and the nucleotide construct encoding NHP products are useful in gene therapy for modulating NHP **expression**. NHP products can be used to genetically engineer host cells to **express** NHP products in vivo, these genetically engineered cells function as bioreactors in the body. NHP sequences are useful in gene **expression** and DNA microarrays. (34pp)

L23 ANSWER 13 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 6
ACCESSION NUMBER: 2001-15821 BIOTECHDS
TITLE: Isolated nucleic acids encoding novel **human** proteins useful for the treatment of disease and as probes for testing and detection;
recombinant kinase and encoding sense and antisense DNA for use in therapy and gene therapy and drug screening
AUTHOR: **Walke D W**; Hu Y; Nepomnichy B; Turner Jr C A; Zambrowicz B
PATENT ASSIGNEE: Lexicon-Genetics
LOCATION: The Woodlands, TX, USA.
PATENT INFO: WO 2001061016 23 Aug 2001
APPLICATION INFO: WO 2001-US5356 15 Feb 2001
PRIORITY INFO: US 2000-184014 22 Feb 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-502793 [55]
AB Isolated nucleic acid molecules (NAMs) encoding new **human** proteins (**kinases**) are claimed. Also claimed are: a NAM (I) having at least 24 contiguous bases of a 3,108 bp sequence or that hybridizes to this sequence under stringent conditions or that encodes a 1,035 amino acid protein sequence (disclosed); NAM (II) comprising a sequence encoding a 1,214 amino acid protein; a NAM (III) having a

sequence encoding a 1,007 amino acid protein sequence; a NAM (IV) comprising at least 24 contiguous bases of a 1,007 bp sequence or that hybridizes to it under stringent conditions or that encodes a 576 amino acid sequence; a NAM (V) having a sequence encoding a 560 amino acid sequence; and a NAM (VI) comprising a sequence encoding a 520 amino acid protein sequence. The proteins are mammal transporter proteins useful for therapy and as drug targets for drug discovery. Protein and DNA sequences are disclosed. (I) to (VI) can be used in sense or antisense gene therapy and as probes for diagnosis. Transgenic animals, fusion proteins, antibodies, agonists and antagonists are disclosed. (70pp)

L23 ANSWER 14 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 7
ACCESSION NUMBER: 2001-13012 BIOTECHDS
TITLE: Novel isolated **human** protease polynucleotide that shares structural similarity with animal **kinases** including calcium/calmodulin-dependent protein **kinases** and serine/threonine protein **kinases**, useful in therapeutics; for use in gene therapy
AUTHOR: **Donoho G**; Scoville J; Turner Jr C A; Friedrich G; Zambrowicz B; Abuin A; Sands A T
PATENT ASSIGNEE: Lexicon-Genetics
LOCATION: The Woodlands, TX, USA.
PATENT INFO: WO 2001042435 14 Jun 2001
APPLICATION INFO: WO 2000-US33362 8 Dec 2000
PRIORITY INFO: US 1999-169769 9 Dec 1999
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-381688 [40]
AB An isolated **human** protein-**kinase** (EC-2.7.1.37) polynucleotide (NHP) (I) selected from a polynucleotide comprising at least 24 contiguous bases of a sequence (S) comprising 1,158 bp, a sequence that encodes a 385 0r 356 amino acid sequence, and a sequence that hybridizes under stringent conditions to S or its complement, is claimed. (I) is useful in therapeutic, diagnostic and pharmacogenomic applications. (I) is useful for the detection of mutant NHP, or inappropriately **expressed** NHPs for the diagnosis of a disease. (I) is useful for drug screening (or high throughput screening of combinatorial libraries) effective in the treatment of symptomatic or phenotypic manifestations of perturbing the normal function of NHP in the body. (I) is useful in conjunction with polymerase chain reaction to screen libraries, isolate **clones**, and prepare **cloning** and sequencing templates. (I) is useful as hybridization probe for screening libraries, and assessing gene **expression** patterns. (31pp)

L23 ANSWER 15 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 8
ACCESSION NUMBER: 2001-08848 BIOTECHDS
TITLE: New isolated **human kinase** polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases; vector-mediated **expression** in host cell for enzyme production and gene therapy
AUTHOR: **Donoho G**; Turner C A; Nehls M; Friedrich G; Zambrowicz B; Sands A T
PATENT ASSIGNEE: Lexicon-Genetics
LOCATION: The Woodlands, TX, USA.
PATENT INFO: WO 2001023579 5 Apr 2001
APPLICATION INFO: WO 2000-US26621 27 Sep 2000
PRIORITY INFO: US 1999-156511 28 Sep 1999
DOCUMENT TYPE: Patent

LANGUAGE: English
OTHER SOURCE: WPI: 2001-266166 [27]
AB An isolated **human kinase** polynucleotide (I) containing a polynucleotide with 24 bases of a DNA sequence (S) with 1,041 bp, a DNA sequence encoding a 347 amino acid protein or a DNA sequence that hybridizes to (S) is claimed. Also claimed are: an isolated nucleic acid molecule (II) encoding a sequence with 315 amino acids; a protein (P) encoded by (I); antibodies to (P); a host cell **expression** system containing (I); transgenic animals, lacking or **expressing** (I); an antagonist or agonist of (P); degenerate nucleic acid variants of (I); and a pharmaceutical formulation for treating biological disorders. The above can be used for the detection of mutant **human kinase** for the diagnosis of diseases and gene therapy. (I) can be used for drug screening and for the generation of antibodies, as reagents in diagnostic assays and are useful for treating mental, biological or medical disorders and diseases. (38pp)

L23 ANSWER 16 OF 20 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2001-14671 BIOTECHDS
TITLE: **Human kinase** protein and polynucleotides encoding the same;
involving vector-mediated gene transfer for **expression** in host cell, antibody, agonist and antagonist
AUTHOR: **Donoho G**; **Hilbun E**; Turner Jr C A; Friedrich G; Zambrowicz B; Sands A T
PATENT ASSIGNEE: Lexicon-Genetics
LOCATION: The Woodlands, TX, USA.
PATENT INFO: WO 2001053493 26 Jul 2001
APPLICATION INFO: WO 2001-US2120 18 Jan 2001
PRIORITY INFO: US 2000-176690 18 Jan 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-442260 [47]
AB An isolated nucleic acid molecule (I) comprising at least 24 contiguous bases of a 1,269 bp sequence, is claimed. Also claimed re: an isolated nucleic acid molecule (II) comprising a nucleotide sequence that encodes a 422 amino acid sequence or its complement; and an isolated nucleic acid. (I) can be used to screen libraries, isolate **clones** and prepare **cloning** and sequencing templates and as hybridization probes for screening libraries. (II) and (III) are useful as therapeutics. Also disclosed are: novel proteins encoded by (III); agonists and antagonists of the NHPs; processes for identifying compounds that modulate the NHPs; DNA vectors; genetically engineered host cells; and antibodies. (33pp)

L23 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:693529 HCAPLUS
DOCUMENT NUMBER: 135:268247
TITLE: Protein and cDNA sequences of novel **human** phospholipases homologs and uses thereof in diagnosis, therapy and drug screening
INVENTOR(S): Hu, Yi; Nepomnichy, Boris; **Donoho, Gregory**; Hilbun, Erin; Turner, C. Alexander, Jr.; Abuin, Alejandro; Friedrich, Glenn; Zambrowicz, Brian; Sands, Arthur T.
PATENT ASSIGNEE(S): Lexicon Genetics Incorporated, USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2001068871	A2	20010920	WO 2001-US7994		20010313
WO 2001068871	A3	20020321			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
US 2002081595	A1	20020627	US 2001-804969		20010313
EP 1317551	A2	20030611	EP 2001-920329		20010313
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
JP 2004500107	T2	20040108	JP 2001-567355		20010313
PRIORITY APPLN. INFO.:			US 2000-188885P	P	20000313
			US 2000-189693P	P	20000315
			WO 2001-US7994	W	20010313

AB This invention provides protein and cDNA sequences for newly identified **human** proteins, designated NHPs, which shares structural similarity with animal phospholipases, including phospholipases C δ-4. The NHPs are novel proteins that are **expressed** in, inter alia, **human** cell lines and **human** fetal and adult brain, cerebellum, spinal cord, thymus, spleen, testis, thyroid, adrenal gland, small intestine, colon, adipose, rectum, and placenta cells. In one embodiment, the invention relates to diagnostic assays for detecting diseases associated with inappropriate NHP activity or levels. Also disclosed are methods for utilizing NHP in drug screening assays and in therapy directed against diseases associated with inappropriate NHP activity or levels.

L23 ANSWER 18 OF 20 MEDLINE on STN DUPLICATE 9

ACCESSION NUMBER: 95287645 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7769843
TITLE: Characterization of a multidrug resistant **human** erythroleukemia cell line (K562) exhibiting spontaneous resistance to 1-beta-D-arabinofuranosylcytosine.
AUTHOR: Grant S; **Turner A**; Nelms P; Yanovich S
CORPORATE SOURCE: Department of Medicine, Medical College of Virginia, Richmond 23298, USA.
CONTRACT NUMBER: 1RO1 CA63753 (NCI)
CA-16059 (NCI)
SOURCE: Leukemia : official journal of the Leukemia Society of America, Leukemia Research Fund, U.K, (1995 May) 9 (5) 808-14.
Journal code: 8704895. ISSN: 0887-6924.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199507
ENTRY DATE: Entered STN: 19950713
Last Updated on STN: 19970203
Entered Medline: 19950706

AB We have assessed the response of a previously characterized multidrug resistant (MDR) **human** erythroleukemia cell line (K562R) to the nucleoside analog antimetabolite 1-beta-D-arabinofuranosylcytosine (ara-C). This cell line has been subjected to selection pressure by intermittent exposure to daunorubicin, but not ara-C, since its initial isolation. In comparison to the parental line (K562S), K562R were

approximately 15-fold more resistant to ara-C as determined by 3H-dThd incorporation, MTT dye reduction and **clonogenicity**. Following a 4-h exposure to 10 microM ara-C, K562S accumulated approximately seven times more ara-CTP, and incorporated approximately 250% more ara-C into DNA than their resistant counterparts. The intracellular generation of ara-CTP was not significantly influenced by the cytidine deaminase inhibitor THU or the deoxycytidylate deaminase inhibitor dTHU (1 mM each) in either cell line. Rates of dephosphorylation of ara-CTP were equivalent in sensitive and resistant cells, as were intracellular levels of both ribonucleotide and deoxyribonucleotide triphosphates. However, K562R displayed a significant (ie 70%) reduction in the level of activity of the pyrimidine salvage pathway enzyme, deoxycytidine **kinase** (dCK), compared to K562S cells. In contrast to U937 leukemic cells, DNA extracted from K562S and K562R cells following exposure to 10 microM ara-C for 6 h did not exhibit the characteristic internucleosomal DNA cleavage on agarose gel electrophoresis typical of drug-induced apoptosis. Lastly, Northern analysis revealed equivalent levels of dCK message in the two cell lines. K562R represents an unusual example of a classical multidrug resistant **human** leukemic cell line exhibiting spontaneous cross-resistance to the antimetabolite ara-C, and may prove of value in attempts to understand the mechanism(s) by which **human** leukemic myeloblasts survive in vivo exposure to combination chemotherapeutic regimens containing drugs that are not classically associated with the multidrug resistance phenomenon.

L23 ANSWER 19 OF 20 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 91328750 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1867641
TITLE: In vitro effects of bryostatin 1 on the metabolism and cytotoxicity of 1-beta-D-arabinofuranosylcytosine in **human** leukemia cells.
AUTHOR: Grant S; Boise L; Westin E; Howe C; Pettit G R; **Turner A**; McCrady C
CORPORATE SOURCE: Division of Hematology/Oncology, Medical College of Virginia, Richmond 23298.
CONTRACT NUMBER: AICR88B36 (NIAID)
CA04875 (NCI)
RO1 CA35601 (NCI)
SOURCE: Biochemical pharmacology, (1991 Jul 25) 42 (4) 853-67.
Journal code: 0101032. ISSN: 0006-2952.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199109
ENTRY DATE: Entered STN: 19910929
Last Updated on STN: 19970203
Entered Medline: 19910909

AB Bryostatin 1 is a macrocyclic lactone protein **kinase** C (PK-C) activator which has demonstrated promising antileukemic activity in preclinical studies. We have examined the effect of this agent on the metabolism and cytotoxicity of 1-beta-D-arabinofuranosylcytosine (ara-C) in both log phase and high-density **human** promyelocytic leukemia cells (HL-60). Exposure of low-density cells to 12.5 nM bryostatin 1 for 24 hr prior to a 4-hr incubation with 1 or 10 microM ara-C resulted in nearly a 2-fold increase in ara-CTP formation. When cells were maintained under high-cell density conditions (e.g. 5 x 10(6) cells/mL) for 24 hr prior to ara-C exposure, a 90% reduction in ara-CTP formation and ara-C DNA incorporation was observed. However, coincubation of high-density cells with bryostatin 1 for 24 hr increased ara-CTP formation 6- to 8-fold, yielding levels essentially equivalent to those achieved in low-density cells. Smaller (but still significant) increases in ara-C DNA incorporation were also noted. Enhancement of ara-CTP formation by bryostatin 1 occurred over a broad ara-C concentration range (0.1 to 100

microM), involved a temperature-dependent process, could not be mimicked by addition of hematopoietic growth factors, and was not related to neutralization of toxic or inhibitory substances in high-density medium. Exposure of cells to bryostatin 1 did not lead to morphologic or functional evidence of HL-60 cell maturation or an increase in cell viability, but did produce a decline in cellular proliferative activity as determined by thymidine and bromodeoxyuridine incorporation and cytofluorometric analysis. Bryostatin 1 did not exert its effects in high-density cells by inhibiting ara-C deamination or by interfering with ara-CTP dephosphorylation, but instead appeared to act by enhancing ara-C phosphorylation. Although cell-free extracts obtained from high-density cells exposed to bryostatin 1 exhibited levels of deoxycytidine **kinase** activity compared to controls, treated cells did display a significant decline in intracellular dCTP levels (e.g. 0.7 vs 1.3 pmol/10(6)), and nearly a 2-fold increase in ATP and UTP concentrations. Ara-CTP formation was also increased substantially by other PK-C activators including phorbol dibutyrate and mezerein (10-100 nM); this process was inhibited more than 70% by the PK-C inhibitor H-7 (50 microM), but not by the PK-C inhibitors staurosporine, tamoxifen, and HA1004. Finally, coadministration of ara-C and bryostatin 1 resulted in greater than expected inhibitory effects toward HL-60 cell **clonogenic** growth.(ABSTRACT TRUNCATED AT 400 WORDS)

L23 ANSWER 20 OF 20 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 91:459539 SCISEARCH
THE GENUINE ARTICLE: GA786
TITLE: INVITRO EFFECTS OF BRYOSTATIN-1 ON THE METABOLISM AND CYTOTOXICITY OF 1-BETA-D-ARABINOFURANOSYLCYTOSINE IN **HUMAN** LEUKEMIA-CELLS
AUTHOR: GRANT S (Reprint); BOISE L; WESTIN E; HOWE C; PETTIT G R; **TURNER A**; MCCRADY C
CORPORATE SOURCE: VIRGINIA COMMONWEALTH UNIV, MED COLL VIRGINIA, DIV HEMATOL ONCOL, BOX 230, MCV STN, RICHMOND, VA, 23298 (Reprint); VIRGINIA COMMONWEALTH UNIV, MED COLL VIRGINIA, DEPT PHARMACOL & TOXICOL, RICHMOND, VA, 23298; ARIZONA STATE UNIV, CANC RES INST, TEMPE, AZ, 85287
COUNTRY OF AUTHOR: USA
SOURCE: BIOCHEMICAL PHARMACOLOGY, (1991) Vol. 42, No. 4, pp. 853-867.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 58

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Bryostatin 1 is a macrocylic lactone protein **kinase** C (PK-C) activator which has demonstrated promising antileukemic activity in preclinical studies. We have examined the effect of this agent on the metabolism and cytotoxicity of 1-beta-D-arabinofuranosylctosine (ara-C) in both log phase and high-density **human** promyelocytic leukemia cells (HL-60). Exposure of low-density cells to 12.5 nM bryostatin 1 for 24 hr prior to a 4-hr incubation with 1 or 10-mu-M ara-C resulted in nearly a 2-fold increase in ara-CTP formation. When cells were maintained under high-cell density conditions (e.g. 5 x 10(6) cells/mL) for 24 hr prior to ara-C exposure, a 90% reduction in ara-CTP formation and ara-C DNA incorporation was observed. However, coincubation of high-density cells with bryostatin 1 for 24 hr increased ara-CTP formation 6- to 8-fold, yielding levels essentially equivalent to those achieved in low-density cells. Smaller (but still significant) increases in ara-C DNA incorporation were also noted. Enhancement of ara-CTP formation by bryostatin 1 occurred over a broad ara-C concentration range (0.1 to 100-mu-M), involved a temperature-dependent process, could not be mimicked by addition of hematopoietic growth factors, and was not related to neutralization of toxic or inhibitory substances in high-density medium.

Exposure of cells of bryostatin 1 did not lead to morphologic or functional evidence of HL-60 cell maturation or an increase in cell viability, but did produce a decline in cellular proliferative activity as determined by thymidine and bromodeoxyuridine incorporation and cytofluorometric analysis. Bryostatin 1 did not exert its effects in high-density cells by inhibiting ara-C deamination or by interfering with ara-CTP dephosphorylations, but instead appeared to act by enhancing ara-C phosphorylation. Although cell-free extracts obtained from high-density cells exposed to bryostatin 1 exhibited levels of deoxycytidine **kinase** activity compared to controls, treated cells did display a significant decline in intracellular dCTP levels (e.g. 0.7 vs 1.3 pmol/10(6)), and nearly a 2-fold increase in ATP and UTP concentrations. Ara-CTP formation was also increased substantially by other PK-C activators including phorbol dibutyrate and mezerein (10-100 nM); this process was inhibited more than 70% by the PK-C inhibitor H-7 (50-mu-M), but not by the PK-C inhibitors staurosporine, tamoxifen, and HA1004. Finally, coadministration of ara-C and bryostatin 1 resulted in greater than expected inhibitory effects toward HL-60 cell **clonogenic** growth. These findings suggest that the novel agent bryostatin 1 induces biochemical perturbations in leukemic cells that favor ara-C activation, particularly in high-density cells exhibiting impaired ara-C nucleotide formation. They also raise the possibility that pharmacologic agents acting through second messenger pathways may modulate the metabolism of ara-C, and potentially other nucleoside analogs.

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(FILE 'HOME' ENTERED AT 10:04:50 ON 28 SEP 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 10:05:11 ON 28 SEP 2004

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L1      1239787 S KINASE?
L2       455391 S HUMAN AND L1
L3      6718512 S CLON? OR EXPRESS? OR RECOMBINANT
L4       224730 S L2 AND L3
L5       606832 S "FETAL BRAIN" OR CEREBELUM OR "BONE MARROW"
L6      1358853 S THYMUS OR PANCREAS OR SPLEEN OR TESTIS
L7         6015 S L4 AND L5
L8         8577 S L4 AND L6
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L10        3209 S "NHP"
L11          13 S L9 AND L10
L12          11 DUP REM L11 (2 DUPLICATES REMOVED)
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L13         115 S E3-E6
                E HILBUN E/AU
L14          24 S E3
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L15         149 S E3-E9
                E TURNER A/AU
L16        1250 S E3
L17        1508 S L13 OR L14 OR L15 OR L16
L18           6 S L9 AND L17
L19           6 DUP REM L18 (0 DUPLICATES REMOVED)
L20       13888 S L9 AND L4
L21          11 S L12 AND L10
L22          34 S L17 AND L4
L23          20 DUP REM L22 (14 DUPLICATES REMOVED)
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L2        455391 S HUMAN AND L1
L3       6718512 S CLON? OR EXPRESS? OR RECOMBINANT
L4        224730 S L2 AND L3
L5        606832 S "FETAL BRAIN" OR CEREBELUM OR "BONE MARROW"
L6       1358853 S THYMUS OR PANCREAS OR SPLEEN OR TESTIS
L7          6015 S L4 AND L5
L8          8577 S L4 AND L6
L9         13888 S L7 OR L8
L10         3209 S "NHP"
L11           13 S L9 AND L10
L12           11 DUP REM L11 (2 DUPLICATES REMOVED)
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L13          115 S E3-E6
                 E HILBUN E/AU
L14           24 S E3
                 E DONOHO G/AU
L15          149 S E3-E9
                 E TURNER A/AU
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L19            6 DUP REM L18 (0 DUPLICATES REMOVED)
L20        13888 S L9 AND L4
L21           11 S L12 AND L10
L22           34 S L17 AND L4
L23           20 DUP REM L22 (14 DUPLICATES REMOVED)

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E7             6     BELTRANDI D/AU
E8           195     BELTRANDI E/AU
E9            12     BELTRANDI ELISABETTA/AU
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L2        455391 S HUMAN AND L1
L3       6718512 S CLON? OR EXPRESS? OR RECOMBINANT
L4        224730 S L2 AND L3
L5        606832 S "FETAL BRAIN" OR CEREBELUM OR "BONE MARROW"
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L9         13888 S L7 OR L8
L10         3209 S "NHP"
L11           13 S L9 AND L10
L12           11 DUP REM L11 (2 DUPLICATES REMOVED)
                 E WALKE D W/AU
L13          115 S E3-E6
                 E HILBUN E/AU
L14           24 S E3
                 E DONOHO G/AU
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                 E TURNER A/AU
L16         1250 S E3
L17         1508 S L13 OR L14 OR L15 OR L16
L18            6 S L9 AND L17
L19            6 DUP REM L18 (0 DUPLICATES REMOVED)
L20        13888 S L9 AND L4
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L28 HAS NO ANSWERS
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NONE ---- Display only the number of postings.
STATUS -- Display statistics of the search.
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L27  ANSWER 1 OF 57     MEDLINE on STN
ACCESSION NUMBER:   2003571452     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 14610273
TITLE:              Wnk1 kinase deficiency lowers blood pressure in
                    mice: a gene-trap screen to identify potential targets for
                    therapeutic intervention.
AUTHOR:             Zambrowicz Brian P; Abuin Alejandro; Ramirez-Solis Ramiro;
                    Richter Lizabeth J; Piggott James; BeltrandelRio
                    Hector; Buxton Eric C; Edwards Joel; Finch Rick A;
                    Friddle Carl J; Gupta Anupma; Hansen Gwenn; Hu Yi; Huang
                    Wenhu; Jaing Crystal; Key Billie Wayne Jr; Kipp Peter;
                    Kohlhauff Buckley; Ma Zhi-Qing; Markesich Diane; Payne
                    Robert; Potter David G; Qian Ny; Shaw Joseph; Schrick Jeff;
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Shi Zheng-Zheng; Sparks Mary Jean; **Van Sligtenhorst Isaac**; Vogel Peter; Walke Wade; Xu Nianhua; Zhu Qichao; Person Christophe; Sands Arthur T
CORPORATE SOURCE: Lexicon Genetics, 8800 Technology Forest Place, The Woodlands, TX 77381, USA.. brian@lexgen.com
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (2003 Nov 25) 100 (24) 14109-14. Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-CG472819; GENBANK-CG472820; GENBANK-CG472821;
GENBANK-CG472822; GENBANK-CG472823; GENBANK-CG472824;
GENBANK-CG472825; GENBANK-CG472826; GENBANK-CG472827;
GENBANK-CG472828; GENBANK-CG472829; GENBANK-CG472830;
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GENBANK-CG472846; GENBANK-CG472847; GENBANK-CG472848;
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GENBANK-CG473809; GENBANK-CG473810; GENBANK-CG473811;
GENBANK-CG473812; GENBANK-CG473813; GENBANK-CG473814;
GENBANK-CG473815; GENBANK-CG473816; GENBANK-CG473817;
GENBANK-CG473818

ENTRY MONTH: 200402

ENTRY DATE: Entered STN: 20031216
Last Updated on STN: 20040203
Entered Medline: 20040202

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ACCESSION NUMBER: 2003500421 EMBASE

TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention.

AUTHOR: Zambrowicz B.P.; Abuin A.; Ramirez-Solis R.; Richter L.J.; Piggott J.; **BeltrandelRio H.**; Buxton E.C.; Edwards J.; Finch R.A.; Friddle C.J.; Gupta A.; Hansen G.; Hu Y.; Huang W.; Jaing C.; Key Jr. B.W.; Kipp P.; Kohlhauff B.; Ma Z.-Q.; Markesich D.; Payne R.; Potter D.G.; Qian N.; Shaw J.; Schrick J.; Shi Z.-Z.; Sparks M.J.; **Van Sligtenhorst I.**; Vogel P.; Walke W.; Xu N.; Zhu Q.; Person C.; Sands A.T.

CORPORATE SOURCE: B.P. Zambrowicz, Lexicon Genetics, 8800 Technology Forest Place, The Woodlands, TX 77381, United States. brian@lexgen.com

SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (25 Nov 2003) 100/SUPPL. 2 (14109-14114).
Refs: 31
ISSN: 0027-8424 CODEN: PNASA6

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 018 Cardiovascular Diseases and Cardiovascular Surgery
022 Human Genetics
029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

L27 ANSWER 3 OF 57 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 93346784 EMBASE

DOCUMENT NUMBER: 1993346784
TITLE: Molecular engineering of the pancreatic β-cell.
AUTHOR: Newgard C.B.; Hughes S.D.; Quaade C.; **Beltrandelrio H.**; Gomez-Foix A.M.; Ferber S.
CORPORATE SOURCE: Gifford Lab. for Diabetes Research, Texas University SW Medical Center, 5323 Harry Hines Blvd.,Dallas, TX 75235, United States
SOURCE: Journal of Laboratory and Clinical Medicine, (1993) 122/4 (356-363).
ISSN: 0022-2143 CODEN: JLCMAK
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 003 Endocrinology
022 Human Genetics
LANGUAGE: English

L27 ANSWER 4 OF 57 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2004:64265 BIOSIS
DOCUMENT NUMBER: PREV200400065655
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention.
AUTHOR(S): Zambrowicz, Brian P. [Reprint Author]; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; **BeltrandelRio, Hector**; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-Qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-Zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, 8800 Technology Forest Place, The Woodlands, TX, 77381, USA
brian@lexgen.com
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (November 25 2003) Vol. 100, No. 24, pp. 14109-14114. print.
ISSN: 0027-8424 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Jan 2004
Last Updated on STN: 28 Jan 2004

L27 ANSWER 5 OF 57 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1997:294196 BIOSIS
DOCUMENT NUMBER: PREV199799593399
TITLE: Regulation of insulin secretion from novel engineered insulinoma cell lines.
AUTHOR(S): Hohmeier, Hans E.; **Beltrandelrio, Hector**; Clark, Samuel A.; Henkel-Rieger, Rosemarie; Normington, Karl; Newgard, Christopher B. [Reprint author]
CORPORATE SOURCE: Gifford Lab. Diabetes Research, Room Y8 212, Univ. Texas Southwestern Med. Center, 5323 Harry Hines Blvd., Dallas, TX 75235, USA
SOURCE: Diabetes, (1997) Vol. 46, No. 6, pp. 968-977.
CODEN: DIAEAZ. ISSN: 0012-1797.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jul 1997
Last Updated on STN: 9 Jul 1997

L27 ANSWER 6 OF 57 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2003:1061760 SCISEARCH
THE GENUINE ARTICLE: 747KN
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR: Zambrowicz B P (Reprint); Abuin A; Ramirez-Solis R; Richter L J; Piggott J; **BeltrandelRio H**; Buxton E C; Edwards J; Finch R A; Friddle C J; Gupta A; Hansen G; Hu Y; Huang W H; Jaing C; Key B W; Kipp P; Kohlhauff B; Ma Z Q; Markesich D; Payne R; Potter D G; Qian N; Shaw J; Schrick J; Shi Z Z; Sparks M J; **Van Sligtenhorst I**; Vogel P; Walke W; Xu N H; Zhu Q C; Person C; Sands A T
CORPORATE SOURCE: Lexicon Genet, 8800 Technol Forest Pl, The Woodlands, TX 77381 USA (Reprint); Lexicon Genet, The Woodlands, TX 77381 USA
COUNTRY OF AUTHOR: USA
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (25 NOV 2003) Vol. 100, No. 24, pp. 14109-14114.
Publisher: NATL ACAD SCIENCES, 2101 CONSTITUTION AVE NW, WASHINGTON, DC 20418 USA.
ISSN: 0027-8424.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 28
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L27 ANSWER 7 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101660 HCAPLUS
DOCUMENT NUMBER: 140:123408
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 8 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101656 HCAPLUS
DOCUMENT NUMBER: 140:123407
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran

del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 9 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101651 HCAPLUS
DOCUMENT NUMBER: 140:123406
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 10 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101648 HCAPLUS
DOCUMENT NUMBER: 140:123405
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the

United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 11 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101646 HCAPLUS
DOCUMENT NUMBER: 140:123404
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 12 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101644 HCAPLUS
DOCUMENT NUMBER: 140:123403
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 13 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101642 HCAPLUS
DOCUMENT NUMBER: 140:123402
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention

AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 14 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101639 HCAPLUS
DOCUMENT NUMBER: 140:123401
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 15 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101632 HCAPLUS
DOCUMENT NUMBER: 140:123400
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 16 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101629 HCAPLUS
DOCUMENT NUMBER: 140:123399
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in micef: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 17 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101626 HCAPLUS
DOCUMENT NUMBER: 140:123398
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
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DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 18 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101624 HCAPLUS
DOCUMENT NUMBER: 140:123397
TITLE: Wnk1 **kinase** deficiency lowers blood pressure

in mice: A gene-trap screen to identify potential targets for therapeutic intervention

AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

L27 ANSWER 19 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:101620 HCAPLUS

DOCUMENT NUMBER: 140:123396

TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention

AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

L27 ANSWER 20 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:101618 HCAPLUS

DOCUMENT NUMBER: 140:123395

TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention

AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke,

Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
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L27 ANSWER 21 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101617 HCAPLUS
DOCUMENT NUMBER: 140:123394
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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L27 ANSWER 22 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101616 HCAPLUS
DOCUMENT NUMBER: 140:123393
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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DOCUMENT TYPE: Journal
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L27 ANSWER 23 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101615 HCAPLUS

DOCUMENT NUMBER: 140:123392
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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L27 ANSWER 24 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101614 HCAPLUS
DOCUMENT NUMBER: 140:123391
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
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L27 ANSWER 25 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101612 HCAPLUS
DOCUMENT NUMBER: 140:123390
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph;

Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 26 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101610 HCAPLUS
DOCUMENT NUMBER: 140:123389
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 27 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101609 HCAPLUS
DOCUMENT NUMBER: 140:123388
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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DOCUMENT TYPE: Journal
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L27 ANSWER 28 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101608 HCAPLUS
DOCUMENT NUMBER: 140:123387
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
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DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 29 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101607 HCAPLUS
DOCUMENT NUMBER: 140:123386
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in micef: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 30 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101606 HCAPLUS
DOCUMENT NUMBER: 140:123385
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff,

Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

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L27 ANSWER 31 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101604 HCAPLUS
DOCUMENT NUMBER: 140:123384
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
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L27 ANSWER 32 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101603 HCAPLUS
DOCUMENT NUMBER: 140:123383
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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L27 ANSWER 33 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101602 HCAPLUS
DOCUMENT NUMBER: 140:123382
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 34 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101597 HCAPLUS
DOCUMENT NUMBER: 140:123381
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
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PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 35 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101594 HCAPLUS
DOCUMENT NUMBER: 140:123380
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in micef: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma;

Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 36 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101591 HCAPLUS
DOCUMENT NUMBER: 140:123379
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 37 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101590 HCAPLUS
DOCUMENT NUMBER: 140:123378
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424

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DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 38 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101587 HCAPLUS
DOCUMENT NUMBER: 140:123377
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice as an example of a gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 39 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101584 HCAPLUS
DOCUMENT NUMBER: 140:123376
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice as an example of a gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 40 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101581 HCAPLUS
DOCUMENT NUMBER: 140:123375
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention

AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 41 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:101576 HCAPLUS
DOCUMENT NUMBER: 140:123374
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 42 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96495 HCAPLUS
DOCUMENT NUMBER: 140:123373
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 43 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96494 HCAPLUS
DOCUMENT NUMBER: 140:123372
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 44 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96492 HCAPLUS
DOCUMENT NUMBER: 140:123371
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 45 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96491 HCAPLUS
DOCUMENT NUMBER: 140:123370
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential

targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 46 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96488 HCAPLUS
DOCUMENT NUMBER: 140:123369
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 47 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96486 HCAPLUS
DOCUMENT NUMBER: 140:123368
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe;

Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 48 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96485 HCAPLUS
DOCUMENT NUMBER: 140:123367
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 49 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96483 HCAPLUS
DOCUMENT NUMBER: 140:123366
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice as an example of a gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 50 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96482 HCAPLUS

DOCUMENT NUMBER: 140:123365
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice as an example of a gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltran del Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 51 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96481 HCAPLUS
DOCUMENT NUMBER: 140:123364
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice as an example of a gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltrandel Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 52 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96472 HCAPLUS
DOCUMENT NUMBER: 140:123363
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice as an example of a gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltrandel Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal;

Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

L27 ANSWER 53 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:96469 HCAPLUS

DOCUMENT NUMBER: 140:128551

TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention

AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltrandel Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

L27 ANSWER 54 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:96467 HCAPLUS

DOCUMENT NUMBER: 140:123362

TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention

AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltrandel Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.

CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114 CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 55 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:96461 HCAPLUS
DOCUMENT NUMBER: 140:123361
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A a gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-Solis, Ramiro; Richter, Lizabeth J.; Piggott, James; Beltrandel Rio, Hector; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L27 ANSWER 56 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:955163 HCAPLUS
DOCUMENT NUMBER: 140:106021
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR(S): Zambrowicz, Brian P.; Abuin, Alejandro; Ramirez-solis, Ramiro; Richter, Lizabeth J.; Piggott, James; **BeltrandelRio, Hector**; Buxton, Eric C.; Edwards, Joel; Finch, Rick A.; Friddle, Carl J.; Gupta, Anupma; Hansen, Gwenn; Hu, Yi; Huang, Wenhu; Jaing, Crystal; Key, Billie Wayne, Jr.; Kipp, Peter; Kohlhauff, Buckley; Ma, Zhi-qing; Markesich, Diane; Payne, Robert; Potter, David G.; Qian, Ny; Shaw, Joseph; Schrick, Jeff; Shi, Zheng-zheng; Sparks, Mary Jean; **Van Sligtenhorst, Isaac**; Vogel, Peter; Walke, Wade; Xu, Nianhua; Zhu, Qichao; Person, Christophe; Sands, Arthur T.
CORPORATE SOURCE: Lexicon Genetics, The Woodlands, TX, 77381, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2003), 100(24), 14109-14114
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 57 OF 57 LIFESCI COPYRIGHT 2004 CSA on STN
ACCESSION NUMBER: 2004:34133 LIFESCI
TITLE: Wnk1 **kinase** deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention
AUTHOR: Zambrowicz, B.P.; Abuin, A.; Ramirez-Solis, R.; Richter, L.J.; Piggott, J.; **BeltrandelRio, H.**; Buxton,

E.C.; Edwards, J.; Finch, R.A.; Friddle, C.J.; Gupta, A.; Hansen, G.; Hu, Y.; Huang, W.; Jaing, C.; Key Jr, B.W.; Kipp, P.; Kohlhauff, B.; Ma, Z.-Q.; Markesich, D.; Payne, R.; Potter, D.G.; Qian, N.; Shaw, J.; Schrick, J.; Shi, Z.-Z.; Sparks, M.J.; **Van Sligtenhorst, I.**; Vogel, P.; Walke, W.; Xu, N.; Zhu, Q.; Person, C.; Sands, A.T.

CORPORATE SOURCE: Lexicon Genetics, 8800 Technology Forest Place, The Woodlands, TX 77381; E-mail: brian@lexgen.com

SOURCE: Proceedings of the National Academy of Sciences, USA [Proc. Natl. Acad. Sci. USA], (20031125) vol. 100, no. 24, pp. 14109-14114. The sequences reported in this article have been deposited in the GenBank database (accession nos. CG472819-CG671551). All valid OSTs are available at <A HREF="http://www.lexicon- genetics.com/omnibank/pnas2003/search.htm">www.lexicon- genetics.com/omnibank/pnas2003/search.htm The reference list used to estimate OmniBank genome coverage and a genomewide view of gene-trap density along the mouse chromosomes can be viewed at <A HREF="http://www.lexicon- genetics.com/omnibank/pnas2003">www.lexicon-genetics.com/omnibank/pnas2003.
ISSN: 0027-8424.

DOCUMENT TYPE: Journal
FILE SEGMENT: G
LANGUAGE: English
SUMMARY LANGUAGE: English

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(FILE 'HOME' ENTERED AT 10:04:50 ON 28 SEP 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 10:05:11 ON 28 SEP 2004

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L1      1239787 S KINASE?
L2       455391 S HUMAN AND L1
L3      6718512 S CLON? OR EXPRESS? OR RECOMBINANT
L4       224730 S L2 AND L3
L5       606832 S "FETAL BRAIN" OR CEREBELUM OR "BONE MARROW"
L6      1358853 S THYMUS OR PANCREAS OR SPLEEN OR TESTIS
L7         6015 S L4 AND L5
L8         8577 S L4 AND L6
L9        13888 S L7 OR L8
L10        3209 S "NHP"
L11          13 S L9 AND L10
L12          11 DUP REM L11 (2 DUPLICATES REMOVED)
                E WALKE D W/AU
L13         115 S E3-E6
                E HILBUN E/AU
L14          24 S E3
                E DONOHO G/AU
L15         149 S E3-E9
                E TURNER A/AU
L16        1250 S E3
L17        1508 S L13 OR L14 OR L15 OR L16
L18           6 S L9 AND L17
L19           6 DUP REM L18 (0 DUPLICATES REMOVED)
L20       13888 S L9 AND L4
L21          11 S L12 AND L10
L22          34 S L17 AND L4
L23          20 DUP REM L22 (14 DUPLICATES REMOVED)
                E BELTRANDELRIO H/AU
L24          84 S E3-E4
                E VANSLIGTENHORST I/AU
                E VAN SLIGTENHORST I/AU
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L25            64 S E3-E4
L26           133 S L24 OR L25
L27            57 S L4 AND L26
L28             0 S L10 AND L27
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